

POST PUBLIC NOTICE ADDENDUM: January 24, 2011

The draft NPDES permit for the ArcelorMittal Burns Harbor LLC. Facility was made available for public comment from November 9, 2010 through December 27, 2010 as part of public notice No. 2010-11C-PH/RD. During the comment period, several comment letters and comments were received via mail, email and verbally at the public hearing held on December 9, 2010. The transcript of the public hearing and all written comments have been placed on the IDEM website at <http://www.in.gov/idem/5338.htm#arcelor>.

A Summary of the comments received and the IDEM response to those comments is given below including any changes made to the draft permit and fact sheet.

Comments received from Mr. Larry Davis of Hebron, Indiana are listed below and they will be followed by IDEM's response to each comment:

Comment #1: What discharges are being eliminated in the proposed NPDES permit for ArcelorMittal Burns harbor to meet the goals of the Clean Water Act?

Response #1: No discharges are being eliminated by the NPDES permit.

Comment #2: ArcelorMittal Burns Harbor's industrial wastewater treatment plant is not capable of adequately treating all of the toxic pollutants known to be present in integrated steel plant wastewaters.

Response #2: IDEM does recognize that the industrial wastewater treatment plant effluent would not be capable of meeting the effluent limits for several parameters at outfall 001 if it did not receive a substantial amount of dilution from mixing with non-contact cooling water prior to discharging from outfall 001. However, EPA regulations allow for mixing of process and non-process wastewater prior to being discharged at the final outfall. The effluent limits at outfall 001 are based on Indiana water quality standards for pollutants that have a reasonable potential to exceed the water quality based effluent limits.

Comment #3: What is the purpose of the 301(g) variance? Shouldn't the variance be allowed for a period of time to allow for efforts to clean up water pollution and achieve compliance with all applicable water quality standards?

Response #3: Section 301(g) of the Clean Water Act and 327 IAC 5-3-4(b)(2) allow for a variance from the applicable BAT requirements through the development of proposed modified effluent limitations (PMELs) for the non-conventional pollutants of ammonia, chlorine, color, iron, and total phenols (4AAP) provided that the following conditions are met:

- (1) The proposed modified effluent limitations (PMELs) will meet the categorical BPT effluent limitations (Technology Based Effluent Limits (TBELs)) or applicable Water Quality-Based Effluent Limitations (WQBELs), whichever are more stringent;
- (2) The PMELs will not result in any additional requirements on other point or non-point sources;
- (3) The PMELs will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life and recreational activities; and,
- (4) The PMELs will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

In November 1983, then owner and operator of the ArcelorMittal Burns Harbor facility, Bethlehem Steel, applied for "waiver" from the BAT limitations contained in the ironmaking and sintering subcategories of 40 CFR 420. This application supplemented previous applications submitted in September 1978, and July 1982. On February 4, 1988, the United States Environmental Protection Agency granted a variance from the best available technology economically achievable requirements provided for by the federal NPDES permit requirements of the Clean Water Act pursuant to section 301(g).

IDEM has reviewed ArcelorMittal Burns Harbor's request for renewal of the PMELs for ammonia and Phenols based on the 301(g) variance PMELs issued in the NPDES permit effective on October 1 1988 in the context of Indiana's currently applicable water quality standards and IDEM's procedures for conducting wasteload allocations. IDEM has approved the PMELs, because the PMELs will result in compliance with Indiana water quality standards and because all Section 301(g) conditions listed above will be met. U.S. EPA has concurred with IDEM's approval of ArcelorMittal Burns Harbor's request to renew the 301(g) variance for the PMELs. The WQBELs for ammonia based on the current applicable water quality criteria are: 1.13 mg/l as the monthly average and 1.7 mg/l as the daily maximum. All of the PMELs are more stringent than the WQBELs for ammonia based on the current applicable water quality criteria.

Indiana does not have numerical water quality standards for total phenols (4AAP) applicable to the Little Calumet River. When the initial 301(g) variance was approved in 1988, IDEM and EPA Region V considered whether any toxic phenols were present in the Outfall 001 discharge at levels that would interfere with attainment of Indiana's water quality standards. The Section 301(g) variance for total phenols was initially approved

on that basis. The current Indiana water quality standards refer to narrative criteria at Section (c)(1)(A) and (B) to protect aesthetic qualities of taste in food fish and odor in the vicinity of the discharge. There are no numeric criteria for Lake Michigan for total phenols.

Comment #4: Why should any variance be considered when there is no commitment to prevent the ongoing discharge of inadequately treated steel mill pollutants?

Response #4: The 301(g) variance is a variance from the technology based effluent limitations allowed by EPA regulations. The 301(g) variance PMELs must meet the applicable water quality based effluent limits and the proposed effluent limits based on the 301(g) variance are more stringent than the water quality based effluent limits. The EPA regulations for 301(g) variances do not require the discharger to meet the otherwise applicable effluent limitations based on the federal effluent limitation guidelines for the Best Available Treatment.

Comment #5: The draft permit does not meet antidegradation procedures and requirements or the characterization and comparison requirements of 40 CFR Part 132, Appendix F, Procedure 2.C. 40 CFR Part 132, Appendix F, Procedure 2.C. requires that the variance requested conforms to the requirements of the state's antidegradation procedures and characterize the extent of any increased risk to human health and the environment associated with granting the variance compared with compliance with WQS absent the variance, such that the state is able to conclude that any such increased risk is consistent with the protection of the public health, safety and welfare.

Response #5: The 2010 draft NPDES permit does not authorize any new or increased discharges when compared to the 1983 final NPDES permit. In accordance with 327 IAC 5-2-11.7 and 5-2-11.3, 327 IAC 2-1-2, 327 IAC 2-1.5-4 and IC 13-11-2-50.5 no degradation is occurring.

IC 13-11-2-50.5 states:

"Degradation"

Sec. 50.5. **"Degradation"**, for purposes of IC 13-18-3, means, with respect to a National Pollutant Discharge Elimination System permit, the following:

(1) With respect to an outstanding national resource water, any new or increased discharge of a pollutant or a pollutant parameter, except for a short term, temporary increase.

(2) With respect to an outstanding state resource water or an exceptional use water, any new or increased discharge of a pollutant or pollutant parameter that results in a significant lowering of water quality for that pollutant or pollutant parameter, unless:

(A) the activity causing the increased discharge:

(i) results in an overall improvement in water quality in the outstanding state

resource water or exceptional use water; and

(ii) meets the applicable requirements of 327 IAC 2-1-2(1) and (2) and 327 IAC 2-1.5-4(a) and (b); or

(B) the person proposing the increased discharge undertakes or funds a water quality improvement project in accordance with IC 13-18-3-2(l) in the watershed of the outstanding state resource water or exceptional use water that:

(i) results in an overall improvement in water quality in the outstanding state resource water or exceptional use water; and

(ii) meets the applicable requirements of 327 IAC 2-1-2(1) and (2) and 327 IAC 2-1.5-4(a) and (b).

327 IAC 2-1-2 Maintenance of surface water quality standards

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-1; IC 13-18-4; IC 13-30-2-1

Sec. 2. The following policies of nondegradation are applicable to all surface waters of the state:

(1) For all waters of the state, existing beneficial uses shall be maintained and protected. No degradation of water quality shall be permitted which would interfere with or become injurious to existing and potential uses.

(2) All waters whose existing quality exceeds the standards established herein as of February 17, 1977, shall be maintained in their present high quality unless and until it is affirmatively demonstrated to the commissioner that limited degradation of such waters is justifiable on the basis of necessary economic or social factors and will not interfere with or become injurious

to any beneficial uses made of, or presently possible, in such waters. In making a final determination under this subdivision, the commissioner shall give appropriate consideration to public participation and intergovernmental coordination.

327 IAC 2-1.5-4 Antidegradation standard

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3

Affected: IC 13-18-4; IC 13-30-2-1

Sec. 4. (a) For all surface waters of the state within the Great Lakes system, existing instream water uses and the level of water quality necessary to protect existing uses shall be maintained and protected. Where designated uses of the waterbody are impaired, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the impairment.

(b) Any surface water of the state within the Great Lakes system whose existing quality for any parameter exceeds the criteria established within this rule shall be considered high quality for that parameter consistent with the definition of high quality water found in this rule; and that quality shall be maintained and protected unless the commissioner finds, after full satisfaction of intergovernmental coordination and public participation provisions under 327 IAC 5-2-11.3, that allowing lower water quality is necessary and accommodates important economic or social development in the area in which the waters are located. In allowing such degradation, the commissioner shall assure water quality adequate to protect existing uses fully. Further, the commissioner shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. **The commissioner shall utilize the antidegradation implementation procedures under 327 IAC 5-2-11.3 in determining if a significant lowering of water quality will be allowed.**

Comment #6: There are at least 4 new wastewater loadings since 1988 which will have additional impacts:

- (1) The discharge from the ArcelorMittal Burns Harbor Deerfield Landfill;
- (2) The discharge from the water cannon
- (3) The discharge of an "unknown portion of all of the water treatment chemicals"
- (4) The addition of storm water and/or other waters to outfall 011's discharge

The use of a cooling water cannon will increased flow rate and discharge volume and also increase any natural resource impacts or damages due to increased water withdrawal from Lake Michigan. The additional impacts of approved water treatment additives are unknown for toxicity, persistence and bioaccumulation. The 2010 draft NPDES permit has added storm water to the authorized discharge from internal monitoring point 011 which was not included in the 1988 NPDES permit.

The sinter plant's connection to the industrial wastewater sewer system and modifications to the sinter plant or blast furnace wastewater treatment systems should be reviewed and examined as potential antidegradation demonstration triggers.

Response #6:

This permit does not authorize any discharge from the proposed Deerfield Landfill.

The additional flow from the water cannon will not cause an increase in the loading of any pollutants discharged from the ArcelorMittal Burns Harbor facility because no other changes resulting in an increased loading to the any receiving water body or the plant

operations was proposed or granted. The additional water from the water cannon results in lower pollutant concentrations and lower temperatures at outfall 001 without increasing any pollutant loadings.

All of the water treatment additives were evaluated individually to determine if they have the potential to cause any adverse impacts to aquatic life at the point where the additives enter waters of the state. The water treatment additives are approved for use at the rate described in the application to use the water treatment additives, so the amount of water treatment additives approved for use is known. The permit also contains the requirement to measure whole effluent toxicity at the final outfall 001. This will ensure that the cumulative impacts of all the wastewater are not toxic to aquatic life.

The existing NPDES permit does not specify the type of water being discharged from each outfall or monitoring point. Outfall 011 and outfall 001 have discharged storm water from the Burns Harbor facility since the first NPDES permit was issued in 1974. The circumstances regarding storm water at the Burns Harbor facility have not changed and therefore, there will not be any new or increased discharges resulting from storm water.

The addition of a new treatment system at the sinter plant to remove 2,3,7,8-TCDF should reduce the loading of pollutants from the sinter plant operation that are currently being sent to the central wastewater treatment plant without the new additional treatment. Therefore, the new additional treatment of the wastewater from the sinter plant will not result in new or increased discharges of the pollutants from the sinter plant.

Comment #7: Variances from valid water quality regulations, where normal costs of compliance within a Point Source category are applicable, undermines the intent, purpose and requirements of the Clean Water Act and Indiana Code. Under the Federal Water Pollution Control Act Section 302(b)(2)(B) Reasonable Progress, a permit which modifies the effluent limitations required by Section 301(b)(2) for toxic pollutants is to be issued "for a single period not to exceed 5 years..." So under the requirements of the Clean Water Act, it is clear that: some progress actually is required as opposed to continuous Variances, years of noncompliance with no enforcement, and disregard of antidegradation procedures and requirements along with the purpose of law.

Response #7: The variance included in the proposed permit for ArcelorMittal Burns Harbor, LLC is for ammonia and phenol based on Section 301(g) of the Clean Water Act for non-conventional pollutants, not toxic pollutants as defined by the Clean Water Act. The variance from the otherwise applicable BAT effluent limitation guideline limitations for ammonia and phenol is in accordance with Section 301(g) of the Clean

Water Act and it is not subject to Section 302(b)(2)(B) of the Clean Water Act which applies to variances from water quality based effluent limitations for toxic pollutants.

Comment #8: To ensure samples and measurements taken are representative of the treated industrial process wastewater discharged at outfall 001, the samples should not include any storm water or mixing with any other waters such as non-contact cooling water or the Town of Burns Harbor's sewage treatment plant.

Response #8: The wastewater being directed to the Secondary Wastewater Treatment Plant (SWTP) has always included the discharge from the sanitary wastewater treatment plant, now owned by the Town of Burns Harbor. However, the discharge from the SWTP, Outfall 011, does not include any non-contact cooling water. Outfall 011 does mix with non-contact cooling water prior to Outfall 001, but the mixed effluent is measured at Outfall 001 not at Outfall 011.

Comment #9: IDEM needs to positively establish the point of compliance for effluent limits and monitoring requirements for internal Outfall Nos. 011 and 111 at a point before their effluent diluted or mixed with any other wastewater, non-contact cooling water or storm water.

Response #9: The NPDES permit does establish the point of compliance for outfall Nos. 011 and 111. In the case of outfall 011, the treated effluent from the Burns Harbor sanitary wastewater treatment plant, formerly outfall 031, does receive additional treatment in the final lagoons of the CWTP and it is included in the discharge from outfall 011.

Comment #10: The SWTP as designed and operated has a lack of adequate treatment capabilities and or capacity for: (1) organic chemicals (2) suspended and emulsified oil and grease, and (3) Toxic, persistent and /or bioaccumulative pollutants. The SWTP does not meet the definition of being a secondary treatment system, so the name is misleading. The SWTP is actually a primary physical/chemical wastewater treatment plant.

Response #10: It is true that the SWTP is not a secondary treatment plant as defined in EPA and IDEM rules, but that is the name given to the WWTP by the original owner, Bethlehem Steel, and it has been continued by the current owner, ArcelorMittal. IDEM does not believe that the name of the wastewater treatment plant is deceptive or intentionally misleading, so IDEM is not going to change the name of the SWTP.

Comment #11: What are the treatment efficiencies or percent removal of the ArcelorMittal Burns Harbor industrial wastewater treatment plant for regulated parameters at outfall 011?

Response #11: IDEM does not have the information necessary to determine the treatment efficiency or percent removal for the regulated pollutants at outfall 011.

Comment #12: How well does IDEM's Wasteload Allocation agree with the calculated removal efficiency for total suspended solids of 83% removal?

Response #12: The Wasteload Allocation developed by IDEM does not estimate or determine the removal efficiency of any regulated pollutant.

Comment #13: How is it possible, without having to upgrade it's industrial wastewater treatment plant, for the industrial wastewater treatment plant at ArcelorMittal Burns Harbor LLC. to meet the effluent limitations for conventional, non-conventional, organic, toxic, persistent, and and/or bioaccumulative pollutants?

Response #13: The industrial wastewater treatment plant, aka SWTP, is capable of achieving compliance with all of the effluent limitations based on the federal effluent limitation guidelines except for the parameters of ammonia and phenol. The SWTP is not capable of meeting all of the water quality based effluent limitations (WQBELs) at outfall 001 without the addition of non-contact cooling water. However, the EPA and state rules allow for the final outfall to contain a mixture of process and non-process wastewater. So ArcelorMittal is in compliance with the federal and state rules even if their SWTP is not capable of achieving compliance with the WQBELs without the addition of non-contact cooling water.

Comment #14: When will we seen zero discharge from Iron and Steel Making, process discharge elimination, or adequate Secondary and/or advanced Tertiary treatment of industrial wastewater at ArcelorMittal Burns Harbor?

Response #14: The need for new or modified wastewater treatment at the ArcelorMittal Burns Harbor facility will be determined by the effluent limitations contained in the NPDES permit. The NPDES permit is written in accordance with all applicable federal and state rules. There are no state or federal rules requiring dischargers to install treatment that is much better than what is needed to achieve compliance with the NPDES permit effluent limitations. So, there is no way to provide a meaningful estimate of the date when new or modified treatment will be required.

Comment #15: When will we see Reasonable Progress towards Clean Water Act Compliance at ArcelorMittal Burns Harbor?

Response #15: IDEM presumes that you are referencing one of the goals of the Clean Water Act to eliminate all discharges of wastewater. That goal is not incorporated into the EPA or state rules. ArcelorMittal Burns Harbor, LLC is in compliance with the Clean

Water Act requirement of obtaining a NPDES permit in accordance with all applicable state and federal rules.

Comment #16: What information has ArcelorMittal Burns Harbor and Nalco provided concerning toxic, persistent and bioaccumulative pollutants present in the approved water treatment additives?

Response #16: ArcelorMittal Burns Harbor provided IDEM with the Material Safety Data Sheet (MSDS) for each water treatment additive. The MSDS lists the chemicals included in the additive that are hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. It is possible for small quantities of Mercury to be present in the water treatment additives without the manufacturer intentionally placing Mercury in the additive, but the amount of Mercury present is unknown based on the information provided by the MSDS.

Comment #17: What is the total mass, volume, concentration and feed rates for each of the approved water treatment additives being used at ArcelorMittal Burns Harbor? What is the environmental fate, toxicity, persistence and/or bioaccumulative characteristics of the water treatment additives approved for use at ArcelorMittal Burns Harbor?

Response #17: The water treatment additives that have been approved for use at ArcelorMittal Burns Harbor were approved based on the toxicity to aquatic life information contained in the MSDS and the design concentration of the additive determined by ArcelorMittal and Nalco. IDEM evaluates the potential impact of each water treatment additive by comparing the estimated effluent concentration with a conservative water quality based effluent value based on the toxicity of the water treatment additive provided with the MSDS. The potential effluent concentration is set equal to the design concentration unless the discharger can demonstrate that the water treatment additive will be consumed in the treatment process. Most water treatment additives are a mixture of chemicals and many of the chemicals in the water treatment additives do not have EPA approved methods for conducting quantitative chemical analysis. Therefore, it is not possible to chemically analyze the effluent to determine the amount of the chemicals in the effluent. That is why the permit also requires ArcelorMittal Burns Harbor to conduct whole effluent toxicity tests to account for any synergistic effects of the chemicals in the effluent.

Comment #18: What is ArcelorMittal Burns Harbor doing to reduce the amount, toxicity, persistence and/or bioaccumulative characteristics of the approved water treatment additives? What is IDEM requiring in the NPDES permit to reduce the amount, toxicity, persistence and/or bioaccumulative characteristics of the approved water treatment additives? Does IDEM have adequate information to determine the

fate of the approved water treatment additives including the toxicity, persistence and bioaccumulative characterizes?

Response #18: ArcelorMittal Burns Harbor is not required by the NPDES permit to do anything to reduce the amount, toxicity, persistence and/or bioaccumulative characteristics of the approved water treatment additives. IDEM does not have the information necessary to determine the fate of every approved water treatment additive.

Comment #19: The facility description in Section 2.1 page 4 of the fact sheet states that: "By-product coke plant process wastewater are not discharged to surface waters at the Burns harbor Plant and will not be regulated in the Burns harbor renewal NPDES permit." Waste ammonia liquor produced from the quenching of the coke oven gases can contaminate the non-contact cooling water when the spiral coolers at the coke plant fail or leak. This have resulted in fish kills at outfall 002 in the past.

Response #19: The facility description in Section 2.1, page 4 of the fact sheet will be revised to state: "By-product coke plant process wastewater is not designed to be discharged directly to surface waters and the NPDES permit will not authorize the discharge of this untreated process wastewater to a point source discharge to waters of the state."

Comment #20: A discharge from iron and steel slag process between outfall 002 and outfall 003 is not included in the proposed permit. The 1988 permit recognizes this discharge on page 18 in the post public notice addendum, item 9.B which states that: "... it will be necessary for them to obtain a NPDES permit, or to add a new outfall 004 to this permit."

Response #20: The permit application for renewal of the NPDES permit issued in 1988 did include outfall 004, but since that time, ArcelorMittal Burns Harbor has modified the storm water runoff at the facility to eliminate the discharge of storm water from the iron and steel slag process directly to a surface water of the state.

Comment #21: The fact sheet incorrectly describes the wastewater being generated by the sinter plant as being associated with the wastewater being generated by the Blast Furnace. The alkaline chlorination wastewater treatment system is used for Cyanide destruction during the start-up and shut-down of the Blast Furnaces and has nothing to do with the Sinter Plant. The point of compliance for the Sinter Plant should be at the Sinter Plant's wet scrubber process discharge before any mixing with any other wastewaters or cooling waters.

Response #21: The description of the alkaline chlorination wastewater treatment system found on page 25 of the fact sheet will be modified to read as follows: "**The chlorine limit is applicable only when the Blast Furnace process water is chlorinated.

ArcelorMittal Burns Harbor does not chlorinate their Blast Furnace process water, and therefore a total residual chlorine (TRC) limit is not proposed. However, TRC monitoring is required when the alkaline chlorination wastewater treatment system is being used." Sintering was replaced with Blast Furnace.

Comment #22: Outfall 009 should have numeric and narrative effluent limits considering the close proximity of open dumped steel mill waste piles.

Response #22: Outfall 009 does have narrative water quality limits that are applicable to all discharges from AMBH. Those limits are found in Part I.B. of the permit titled Narrative Water Quality Standards. It is not practicable at this time to calculate WQBEL numeric limits for a storm water induced discharge.

Comment #23: Page 57 of the fact sheet incorrectly states that ArcelorMittal Burns Harbor is not intentionally introducing Mercury, Copper, Zinc or Silver to the steel making process as raw materials, etc. The development document written by EPA in 1982 lists the pollutants known to be present in wastewater from the steel making process and all of the above mentioned pollutants are known to be present in steel making wastewater.

Response #23: The fact sheet will be revised to indicate that these pollutants are known to be present in the discharge from steel mills in accordance with the development document for steel making written by EPA in 1982.

Comment #24: The increased surface area and height of the raw material storage piles and millions of tons of open dumped steel mill wastes impacts both infiltration and run-off velocities respectively. There are no storm water collection structures in the raw material storage yards or around the piles of open dumped steel mill wastes. The storm water is currently uncontrolled and flows to whatever down gradient path of least resistance that is available... ultimately toward or into Lake Michigan via surface and/or groundwater. The storm water sewer system discharge through Outfall 002 should be suspect given the amount of local air deposition of pollutants, such as particulates, from the Coke Ovens, Sinter Plant, and Blast Furnace processes which can be washed into the discrete conveyance from process building structures and piles of raw material and wastes. Once again, the massive dilution ratio of non-contact cooling water mixed into the discharge of Outfall 002 will serve to dilute these toxic, persistent and/or bioaccumulative pollutants below their Limits of Detection.

This NPDES permit must comprehensively address all toxic pollutants known to be present or potentially present in the storm water from the Burns harbor Plant. The Storm Water Pollution Prevention Plan (SWPPP) must also address all toxic pollutants known to be present or potentially present in storm water at ArcelorMittal Burns Harbor including the pollutants transport and environmental fate.

Response #24: The NPDES permit includes the requirement for ArcelorMittal Burns Harbor to develop and implement a comprehensive storm water pollution prevention plan that must address all pollutants known or expected to be present in the storm water associated with industrial activity that is generated on and subsequently leaves the ArcelorMittal Burns Harbor property.

Comment #25: In order to ensure accurate and representative measures of performance for ArcelorMittal Burns Harbor's discharges, monitoring and reporting for the following parameters should be included in the NPDES permit conditions, effluent limitations and monitoring requirements for all raw wastewaters and subsequent treated wastewater effluent at the point of treatment process discharge or point of compliance for all discharges: Dissolved Oxygen, Flow, pH, Specific Conductance and Temperature should be monitored on a continuous basis; Alkalinity, Ammonia, Chemical Oxygen Demand (COD), Chloride, Oil and Grease, Phenol, Phenol (4AAP), Total Suspended Solids, Total Dissolved Solids, Total Organic Carbon (TOC), Arsenic, Antimony, Barium, Boron, Cadmium, Copper, Iron (as an indicator), Lead, Manganese, Mercury, Metals (total), Nickel, Selenium, Silver, Thallium, Vanadium, Zinc, Chloroform, Residual Chlorine, Sulfate, Volatile Organic Compounds (VOC) and Dioxin & Dioxin Like Compounds..

Response #25: The pollutant parameters that are monitored in this NPDES Permit were selected to include all pollutant parameters required by the federal effluent limitation guidelines 40 CFR 420, Iron and Steel Manufacturing Point Source Category and all pollutant parameters that were demonstrated to have a reasonable potential to exceed the applicable WQBELs for discharges from Outfall 001, Outfall 002 and Outfall 003.

In accordance with the EPA permit writers' manual, the monitoring frequency for all parameters is determined on a case by case basis which is believed to be sufficient to characterize the effluent quality; detect events of non-compliance and to consider the potential cost of monitoring to the permittee. The following factors were taken into consideration when establishing the monitoring frequency: (1) The variability of the effluent quality based on available monitoring data, (2) The available treatment plant capacity under average operating conditions, (3) the monitoring frequency in the previous permit, (4) the treatment method used, (5) the compliance history, (6) the cost of monitoring and analysis, (7) the location of the sampling, (8) the nature of the pollutants and (9) the frequency of the discharge.

Comment #26: IDEM and ArcelorMittal need to determine how representative the Oil and Grease testing is for suspended and/or emulsified oil and grease in discharge from the Burns Harbor plant. This is needed because the characteristics of the combined process and non-process wastewaters will contain sufficient levels of suspended and/or

emulsified oil and grease as opposed to free floating oil and grease. The use of oil separation will not adequately separate oil and grease droplets smaller than free oil nor will it break down and separate oil and grease emulsions in wastewater in providing adequate treatment. Suspended and/or emulsified oil and grease can be adequately treated, however, ArcelorMittal Burns Harbor's SWTP lacks the capability to treat these pollutants prior to discharging to the Little Calumet River and ultimately to Lake Michigan.

Response #26: IDEM has reviewed the applicable approved analytical methods for detecting oil and grease in water. IDEM believes that suspended and/or emulsified oil will be detected and measured using the approved methods for oil and grease.

Comment #27: All monitoring of flow rates, including the Water Cannon Discharge, should be easily addressed and can be installed within a short period of time, i.e. one month.

Response #27: The schedule of compliance for the installation of a flow meter on the water cannot will not be modified as requested.

Comment #28: The 4.5 years schedule of compliance for Mercury, Copper, Zinc and Silver is not reasonable given the need for Variances and the current lack of corporate commitment to eliminate discharges from ArcelorMittal Burns Harbor.

Response #28: The 4.5 year schedule of compliance was justified by ArcelorMittal Burns Harbor and approved by U.S. EPA which has been scrutinizing all schedules of compliance in Major NPDES permits.

Comment #29: How will IDEM and ArcelorMittal Burns Harbor demonstrate that they are not discharging persistent and/or bioaccumulative pollutants which has long-term impacts upon human health, Great Lakes, Lake Michigan and the Little Calumet River?

Response #29: IDEM and ArcelorMittal cannot demonstrate that the discharges from ArcelorMittal Burns harbor will not discharge persistent and/or bioaccumulative pollutants since we all know that those type of pollutants are present in the discharges from ArcelorMittal Burns Harbor.

Comment #30: ArcelorMittal and their predecessors have never been in compliance with the standard conditions found in Part II.B.4 of the permit regarding the handling of removed substances. Over the past 45 years, the Burns Harbor Plant has amassed millions of tons of open dumped steel mill wastes including the substances removed from the treatment of wastewaters upon the southern shores of Lake Michigan and also near the Little Calumet River with numerous excuses for exemption of storage for future use and/or recycling.

Given the known hydraulic gradients and close proximity of these open dumped and uncontrolled steel mill waste piles to Lake Michigan or the Little Calumet River, it is inevitable that these pollutants will enter waters of the state. These piles of wastes have no liner or cover to prevent Aeolian transport, physical erosion, storm water transport and/or leaching of contaminants and their subsequent discharge via ground water and/or surface water.

Why has IDEM failed to adequately address this potential endangerment to human health and our environment from these uncontrolled and open dumped wastes? What is the current status of any IDEM enforcement activities concerning the numerous and ongoing Permit Violations and noncompliance at ArcelorMittal Burns Harbor?

Response #30: The new NPDES permit includes a requirement to develop and implement a storm water pollution prevention plan (SWPPP). The SWPPP will address the contaminated storm water runoff from the Burns Harbor Plant including the areas where waste materials are being stored. There are no active or pending enforcement actions from the IDEM Office of Water Quality against Burns Harbor regarding the storm water from the waste storage piles.

Comment #31: IDEM should require the utilization of Automated Leak/Spill Detection technology for the non-contact cooling water at a point prior to mixing with other waters. Automated Leak/Spill Detection technology can be used to detect leaks of VOCs, pH and specific conductance. Will IDEM require Automated leak/spill detection at non-contact cooling water Outfall Nos. 001, 002 and internal Outfall No. 011?

Response #31: Although the use of leak/spill detection technology within the non-contact cooling water systems is a good suggestion for many different reasons, the applicable rules and laws incorporated into the NPDES permit do not require the use of leak/spill detection technology within the non-contact cooling water system.

The NPDES permit contains monitoring requirements designed to ensure compliance with the applicable technology and water quality based effluent limitations that were established in accordance with 327 IAC 2 and 327 IAC 5. IDEM will not modify the NPDES permit to require the use of automated leak/spill detection technology.

Comment #32: The NPDES permit prohibits the discharge of polychlorinated biphenyl (PCB) compounds but fails to establish any monitoring requirement to ensure that this is the case (See Part III.B of the permit). Will IDEM establish Monitoring Requirements to ensure no PCBs are discharged?

Response #32: The requirement to not discharge any PCB compounds is a prohibition against the use of any PCB containing compounds at the AMBH facility. IDEM believes

that an effluent limitation for PCBs is not warranted at this time. Therefore, the NPDES permit will not contain monitoring requirements for PCBs.

Comment #33: If IDEM wants to see thousands of families able to work in the steel industry in Northwest Indiana, then you might want to consider encouraging companies like ArcelorMittal to begin upgrading their Iron and Steel making processes to stay competitive with the rest of the world. We can have a world class steel industry here in Indiana that is sustainable. ArcelorMittal in building the largest steel corporation in the world has acquired fine examples proving that it can technically and economically be done! However, the proposed NPDES permit does too little to promote or encourage ArcelorMittal to actually make Iron and Steel Making sustainable at its Burns Harbor Plant.

Response #33: The rules and laws incorporated into a NPDES permit do not authorize IDEM to require ArcelorMittal to install any additional or new treatment technology unless it is necessary to achieve compliance with the applicable effluent limitations.

Comments received from ArcelorMittal Burns Harbor, LLC. are listed below and they will be followed by IDEM's response to each comment:

Comment #34: Outfall 001 (Pages 2 to 6 of 68 of the Permit)

The phenol sample type should be changed from Grab to 24-Hour Composite

Lead should not be identified with Footnote [7] because Lead is not included in the Schedule of Compliance.

In footnote [2], the statement that the daily maximum WQBEL for silver is greater than the LOD, but less than the LOQ is incorrect and should be removed.

Footnote [2] third paragraph should be revised to read as follows: "Compliance with the daily maximum mass value for Total Residual Chlorine and Total Recoverable Silver will be demonstrated if the calculated mass value is less than 68.6 lbs/day and 0.73 lbs/day, respectively."

Footnote [8] does not address how to report flow during the interim period when no flow monitoring device is present. We suggest the following permit condition: "During the period of time before the installation of the flow measuring device, ArcelorMittal Burns Harbor LLC may estimate the total 24-Hour flow from the water cannon."

Footnote [9] The Copper, Mercury, Silver and Zinc concentrations and mass loading should not be encumbered with the calculation that considers the flow of the water cannon. The reason the water cannon flow had to be measured was reportedly because dilution flows cannot be considered when 301(g) variances are in place.

However, there are no such restrictions for pollutants not subject to Section 301(g) variances.

PH Continuous monitoring: The current permit tracks the federal NPDES regulations at 40 CFR 401.17 and allows excursions outside of the specified limits under specific conditions. See page 10 of the current permit. This permit language should be included in the renewed NPDES permit for Outfalls 001 and 002.

There is no definition in the NPDES permit for "7-day average" ammonia mass or concentration. ArcelorMittal requests that IDEM utilize the definition from page 13 of the current NPDES permit.

Response #34: The sample type for Phenol will be changed from grab to 24-hour composite. Footnote [7] will be removed from the limits for Lead. Footnote [2] will be revised as suggested above. Footnote [8] will be revised as suggested above. The permit will not be modified to remove the requirement to account for the flow from the water cannon when calculating the concentration values for Copper, Mercury, Silver and Zinc. The permit limitations for pH at Outfall Nos. 001 and 002 will be modified to allow for excursions of the limits under specific conditions equivalent to the conditions found on page 10 of the previous permit. The permit will be modified to include a definition for 7-day average found on page 13 of the previous permit.

Comment #35: Outfall 002 (Pages 7 to 9 of 68)

The authorization language needs to be modified to reflect what is in the current permit. The suggested language is as follows: "The permittee is authorized to discharge from Outfall 002. The discharge is limited to non-contact cooling water, treated process wastewater from the lagoon re-circulating pump station and storm water."

Footnote [4] inappropriately refers to Outfall 001

Footnote [5] should be removed because Outfall 002 has an installed flow measurement device.

We request that the monitoring frequency for dissolved iron, fluoride, lead and zinc be set at monthly for purposes of simplifying the monitoring and reporting requirements.

Response #35: The authorization language for Outfall 002 will be modified as suggested above. Footnote [4] will be modified to not refer to Outfall 001. Footnote [5] will be removed from the permit. The monitoring frequency for dissolved iron, fluoride, lead and zinc will not be reduced.

Comment #36: Outfall 003 (Pages 10 and 11 of 68)

Footnote [1] second paragraph: The last sentence should be removed because there is no mass limit proposed for total residual chlorine at Outfall 003.

Response #36: Footnote [1] will be modified to remove the last sentence as requested.

Comment #37: Outfall 011 (Page 12 of 68)

The Phenols (4AAP) and cyanide sample requirements should be changed from Grab to 24-Hour Composite.

The proposed Hexavalent Chromium limit at Outfall 011 should be removed from the permit because the low-volume waste stream from the Hot Dip galvanizing Line (HDGL) that contains the Hexavalent Chromium is isolated from the Burns Harbor wastewater collection system. The wastewater from the HDGL is collected in a double-walled tank until sufficient volume is obtained and then the wastewater is shipped via tanker truck to an off-site treatment facility for disposal. ArcelorMittal proposes that the permit prohibit the discharge of the low volume Hexavalent Chromium waste stream to the Burns Harbor wastewater collection and treatment system.

Naphthalene and Tetrachloroethylene concentrations at Outfall 011 are slightly above the MDLs and it is recommended that the following footnote be included in the permit: [5] Compliance with the daily maximum mass values for Naphthalene and Tetrachloroethylene will be demonstrated if the calculated mass values are less than 6.6 lbs/day and 3.3 lbs/day respectively. Lab reporting levels of 10 ug/l and 5 ug/l.

A footnote regarding flow measurement should be included in the permit as follows: "[6] Flow shall be calculated using measurement from the existing flow measuring devices located at the effluent from the secondary wastewater treatment plant and the lagoon re-circulating pump station."

We request that monitoring frequencies for all pollutants, except for Naphthalene and Tetrachloroethylene, be set at once per week in recognition of the cost burden and the exemplary compliance record for the technology based effluent limits at Outfall 011. We request that the monitoring frequency for naphthalene and Tetrachloroethylene be set at once per month. That monitoring frequency should be sufficient to determine if the request for a monitoring waiver should be granted for naphthalene and Tetrachloroethylene.

Response #37: The effluent limitations for Hexavalent Chromium at Outfall 011 will be removed from the permit since ArcelorMittal has demonstrated that the Hexavalent Chromium wastewater is being disposed at an off-site location. The permit will be modified to specify the daily maximum values for Naphthalene and

Tetrachloroethylene. Footnote [6] will be included in the permit as requested above. IDEM will not change the monitoring frequency for all pollutants to once per week and the monitoring frequency for Naphthalene and Tetrachloroethylene to once per month.

Comment #38: Outfall 111 (Page 13 of 68)

The "central treatment" exemption set forth in 40 CFR 420.01(b)(1) applies to the Burns Harbor plant. This exemption excludes the plant from having to meet categorical ELG limits under Part 420 at any internal monitoring points. Pursuance to this exemption, IDEM should apply the limit for 2,3,7,8-TCDF at Outfall 011 following the central treatment of combined process wastewaters in the same manner as it applies to the other ELG limits at Burns Harbor.

The Burns Harbor Plant qualified for the "central treatment" exemption in 1982. This exemption remains in effect. Revisions to Part 420 in 2002 did not modify or eliminate this exemption. The exemption as applied to the Burns Harbor Plant expressly provides that the "total plant" (meaning all sources that discharge process wastewater) are "excluded from the provisions" of 40 CFR Part 420. This includes the internal limit for 2,3,7,8-TCDF set forth at 40 CFR 420.02(f)(2).

Although an internal limit for 2,3,7,8-TCDF was adopted as part of the 2002 amendments to 40 CFR 420, the preamble to the rule clarified that while the "central treatment" exemption was not being extended to "any additional mills", any mill whose permit is based on this provision [could] continue to use it". See 67 Federal Register 64226 (October 7, 2002). Therefore, the final rule did not modify the exemption for those mills that were already covered by the exemption and, as provided in 40 CFR 420.01(b)(1), Burns Harbor continues to be exempt from internal limits established under Part 420.

The Burns Harbor central treatment of combined process wastewater will effectively remove the 2,3,7,8-TCDF below the ELG based limit prior to the final discharge at Outfall 011. This, based upon the "central treatment" exemption, internal Outfall 111 and the limit for 2,3,7,8-TCDF are inappropriate and should be removed from the permit. The ELG limit for 2,3,7,8-TCDF should apply at Outfall 011.

While ArcelorMittal believes that the 2,3,7,8-TCDF limit at internal Outfall 111 should be eliminated, if maintained, please revise this Section of the permit as follows:

The internal monitoring point is located at the Reclamation Service Building , not the Reclamation Solids Building.

The second sentence should be revised as follows to reflect the fact that the discharge from the Reclamation Services Building is not fully treated process wastewater, and that

additional flow from the dewatering of the Basic Oxygen Furnace wastewater treatment plant slurry and a new blast furnace wastewater treatment plant slurry processing system will also likely be treated in the thickener in the near future:

"The discharge is limited to partially treated process wastewater from the sinter plant, from the dewatering of the BOF wastewater treatment plant slurry and from the blast furnace slurry processing system."

Response #38: The following effluent limitations rationale for including an internal monitoring point and effluent limitations for 2,3,7,8-TCDF at an internal monitoring point was provided to IDEM by the U.S. EPA Region V during the development of the draft NPDES permit for ArcelorMittal Burns Harbor:

40 C.F.R. Part 420 includes the categorical effluent limitation guidelines (ELGs) for the iron and steel manufacturing point source category. Part 420 was initially promulgated in 1982 and has been amended since then, including on October 17, 2002 (67 Fed. Reg. 64216). The 2002 modifications included new or revised technology-based ELGs for certain wastewater discharges for direct reduced ironmaking, briquetting, and forging, and for certain wastewater discharges associated with metallurgical cokemaking, ironmaking and sintering operations. The 2002 revisions to the sintering operations category included new ELGs for 2,3,7,8-TCDF for sintering operations that have wet air pollution control systems.

40 C.F.R. § 420.01(b) includes a temporary exclusion from the requirements in Part 420 for certain central treatment facilities, including Bethlehem Steel's facility in Burns Harbor, IN, provided the owner or operator of the facility requested, prior to July 26, 1982, the Agency to consider establishing alternative effluent limitations for their facility and provided also that the owner or operator submitted to the Agency, on or before July 26, 1982, detailed information about their facility, including: (1) the existing treatment facility, (2) the existing discharges to and from the treatment facility; (3) cost estimates of the least costly investment required to meet the standards currently applicable and a description of the hypothetical treatment system, (4) projections of the standards that could be met with a hypothetical treatment system with a cost equal to the Agency's cost estimate, and (5) production rate in tons per day for each process contributing wastewater to the central treatment facility. See 40 C.F.R. § 420.01(b)(2).

When the revisions to Part 420 were initially proposed in 2000, EPA sought to eliminate the central treatment exclusion entirely. When commenters opposed that proposal, EPA thereafter confirmed that while most facilities that had been eligible to apply for the exclusion in 1982 had not in fact applied (and thus were not eligible for the exclusion at all), there remained one or two facilities for which owners or operators had both applied for the exclusion and still had permits that were based on the exclusion. In order to

allow those facilities to continue to rely on limits in their existing permits that were based on the 1982 exclusion, EPA did not eliminate the central treatment exclusion in the final rule published in 2002, as originally planned. However, EPA also specifically did not amend the 1982 exclusion to apply to the new and revised ELGs that were included in the final 2002 rule.

Commenters asked EPA to expand the central treatment provision. Commenters requested this expansion because they were concerned that the costs of the proposed rule would be too high if the limits and standards were made more stringent

EPA disagreed with commenters that it should expand the central treatment provision. Because of the prevailing economic situation in the iron and steel industry, technological reasons in some subcategories, and performance issues in others, EPA has decided to go forward with new or revised regulations for only five subcategories (cokemaking, sintering, ironmaking, steelmaking, and a subcategory for other operations). With the substantially reduced projected economic burden on the industry, U.S. EPA does not believe that expanding § 420.01(b)(2) is necessary.

The reference in the final paragraph cited above to the "21 eligible mills" includes the Burns Harbor facility. EPA considered, and *rejected*, the proposal to expand the central treatment exclusion in 40 C.F.R. § 420.01(b) to cover the new and revised ELGs that EPA promulgated in the new rulemaking, including the new ELG for 2,3,7,8-TCDF for sintering operations with wet air pollution control. The 2002 revisions left intact the July 26, 1982 deadline in 40 C.F.R. § 420.01(b) for applying for the exclusion, thus limiting the central treatment exclusion to the scope it had when promulgated in 1982.¹

Applying the analysis above to the Burns Harbor facility, the ELG for 2,3,7,8-TCDF - including the specification that ArcelorMittal must demonstrate compliance with the limits separately or in combination with blast furnace wastewater, but prior to commingling with any non-sintering or non-blast furnace operations - should be included in the permit. As specified in the final regulation, the facility may commingle ancillary non-blast furnace wastewater comprising 5% of the total flow or less with their sintering wastewater. See 40 C.F.R. § 420.29.

¹ The preamble for the 1982 rulemaking indicates that EPA never intended for the central treatment exclusion to apply to new or revised ELGs in the future. At the time, EPA was subject to a court-imposed deadline to promulgate the final 1982 rule. EPA included the temporary exclusion in order both (i) to allow EPA to publish the final rulemaking in accordance with the deadline, and (ii) to give EPA a brief additional period to evaluate arguments from members of the group of 21 eligible mills that the expected

cost to them of complying with the rules finalized in the 1982 rulemaking would be significantly higher than estimated by the Agency, to the extent that the new limitations would not represent BPT, BAT, BCT, or PSES for the facility. In such circumstances, EPA had indicated that it might decide to propose other limits or standards for these facilities as alternatives to the limits or standards finalized in the 1982 rule. The EPA anticipated that all of this could be accomplished within a very short period and intended that the central treatment exclusion would be effective for only the minimum period necessary to accomplish those goals. See 47 Fed. Reg. 23258, 23266 – 23267 (May 27, 1982).

By contrast with its 1982 preamble, EPA included in the preamble for the final 2002 rulemaking the finding that complying with the new and revised ELGs, including the new ELG for 2,3,7,8-TCDF, would have minimal economic impact on the group of 21 eligible mills, including the Burns Harbor facility. This finding eliminates, for purposes of the new and revised ELGs in the 2002 rulemaking, the central rationale for applying the 1982 exclusion, namely that a limited and temporary exclusion would give EPA time to consider alternative limits for mills that could demonstrate that the cost of complying with the new and revised ELGs was disproportionately higher than EPA had projected. EPA also specifically linked this finding to its decision not to expand the 1982 central treatment exclusion. See 47 Fed. Reg. at 64226 (October 17, 2002).

The NPDES permit will not be modified to remove internal monitoring point 111 or the effluent limitations for 2,3,7,8-TCDF at internal monitoring point 111.

Comment #39: Outfall 009 (Page 14 of 68)

The following footnote should be added that would provide for the elimination of Outfall 009 and all permit conditions applicable to Outfall 009:

[3] Upon notification to IDEM that the permittee has eliminated the discharge from Outfall 009, all conditions of the NPDES permit applicable to Outfall 009 shall be stayed for the balance of the permit term.

Response #39: IDEM will not be changing the permit to specifically address the removal of Outfall 009. When Outfall 009 is removed, IDEM will modify the permit to remove Outfall 009.

Comment #40: Part I, Section C, Subsection 4 (Page 19 of 68)

The paragraph at the end of this subsection refers to a table that does not exist. This paragraph should be removed from the permit.

Response #40: IDEM agrees to remove the last paragraph contained in Part I.C.4 of the permit as requested.

Comment #41: Part I, Section D Schedule of Compliance (Pages 21 to 23 of 68)

ArcelorMittal agrees in principle with the objective of the proposed schedule of compliance for copper, mercury, silver and zinc, which is to achieve compliance with WQBELs for those metals at Outfall 001 within 54 months of the effective date of the permit. However, we find certain terms and conditions of the proposed compliance schedule unworkable and not suitable for the Burns Harbor Plant. The following are some specific examples:

1. Paragraph 1, in two places, states that IDEM will provide comments in 30 days and the permittee will implement immediately after receipt of the comments. This language places requirements upon IDEM that may not be met and requires Burns Harbor to potentially implement comments from IDEM staff that are unrealistic or impossible to perform.
2. Paragraph 1 requires the development of sampling plans upstream and downstream of each distinct process discharging to outfall 001. Due to the unique configuration of the Burns Harbor sewer systems, this requirement is premature for this stage of the evaluation, especially when it is believed that potential sources may be related to storm water runoff.
3. Paragraph 1c requires the assessment of treatment technologies. This, again, seems premature until a specific source is identified and pollution prevention techniques are deemed to not be feasible.
4. Paragraphs 2c and 2d require selection of treatment technologies and proposed schedules for construction. This is premature until specific source processes or location within the plant have been identified and confirmed.

In an effort to address these issues, Attachment B presents a mark-up of the proposed compliance schedules with requested changes. The compliance schedule approach set out in Attachment B is a more logical and scientific approach for addressing the unique circumstances at Burns Harbor and retains the structure of IDEM's proposed compliance schedule in the draft permit. The compliance schedule in Attachment B also provides:

1. necessary and reasonable time frames to address the difficult issues associated with identifying controllable sources of copper, mercury, silver and zinc within the Burns Harbor Plant;
2. reporting progress on the results of investigations on a reasonably frequent basis; and

3. implementing appropriate control measures as may be necessary on a timely basis.

There are hundreds of individual process water, process wastewater, non-contact cooling water and storm water streams across the Burns Harbor Plant that could be potential sources and may require, at the least, implementation of best management practices. We believe this program will be a major undertaking that will require a substantial commitment of time and resources. Accordingly, to maximize the time available, we have proposed the quality assurance project plan (QAPP) for the proposed Pollutant Source and Reduction Plan (PSRP) be submitted to IDEM for review within three months after permit issuance rather than six months as proposed in the draft permit.

We anticipate the QAPP for the proposed PSRP will include the following elements:

1. initial and ongoing repetitive sampling and analysis at a large number of strategic locations in the Plant process water, non-contact cooling water and storm water systems for the metals at issue, followed by more in-depth sampling and analysis of those areas showing possible contributions;
2. concurrent in-depth review of possible trace levels of the metals at issue in raw materials;
3. concurrent examination of other vectors such as atmospheric deposition and storm water runoff;
4. identification of possible short-term and long-term control measures that might range from best management practices (BMPs) to installation of new or modified wastewater treatment systems;
5. selection of control alternatives; and
6. implementation

Clearly, this is not a trivial effort. Such investigations could cost in excess of \$100,000 just to document possible sources, let alone to develop and implement technological solution to the extent they can be found.

Response #41: IDEM agrees to modify the compliance schedule for copper, mercury, silver and zinc as requested by ArcelorMittal.

Comment #42: Part I, Section E Whole Effluent Toxicity Limitations (Pages 23 to 30 of 68)

The title of this section should not include the word "limitations" because it only includes monitoring requirements. The description of effluent sampling and test solution renewal in Part I.E.1.b (page 25) is confusing. The phrase "on alternate days" should be deleted from the last sentence in the first paragraph in order to make the language consistent with federal guidance.

The draft permit proposes that chronic WET tests be conducted monthly for the first three months and quarterly for the remaining term of the permit (Part I.E.1.d, page 26). The nature of Outfall 001 (a substantial volume of non-contact cooling water) and the lack of observed toxicity in the past test do not support such a high testing frequency. The current permit only required monthly testing for the first three months. Requiring quarterly testing for the duration of the permit is excessive and very expensive. ArcelorMittal recommends that if no significant toxicity (<1.0 TUc) is observed in the first 3 months, then the testing frequency should be reduced to once per year. This sampling schedule addresses the potential of both short-term and long-term variability in toxicity, and will provide the data that IDEM will need in making a determination about potential WET requirements for the next permit.

If significant chronic toxicity (>1.0 TUc) is observed and confirmed as described in the provisions in this Section, then ArcelorMittal would be required to submit a plan for a Toxicity Reduction Evaluation (TRE)(Part I.E.2, pages 28-30). Part I.E.2.b of the draft permit proposes that the TRE be initiated within 30 days after the submission of the study plan. ArcelorMittal believes that it would be inappropriate to begin such a study prior to receiving approval of the study plan from IDEM. Therefore, the language of this subsection should be changed to "within 30 days after receiving approval of the TRE plan from IDEM".

Part I.E.2.e describes post-TRE monitoring requirements. ArcelorMittal request that the testing frequency be changed from once per quarter to once per year after the first three monthly tests, as discussed above for the general monitoring frequency. Permit language still requires implementation of a TRE if two consecutive tests fail the specified criteria. ArcelorMittal requests that the trigger for a TRE be three consecutive test failures. This request is appropriate because the WET test protocol is non-specific with many variable that can influence the results, some of which are lab related and not effluent specific.

Response #42: IDEM agrees to remove the word "Limitations" in the title of this section. The language in Part I.E.2.b will not be changed such that the TRE will be initiated within 30 days after receiving approval of the TRE pan from IDEM. The WET

monitoring frequency after the initial three month period will not be changed from quarterly to annually.

Comment #43: Part I, Section F Pollution Minimization Program (Pages 30 and 31 of 68)

Section F was proposed to address, and potentially minimize, the use of sodium hypochlorite for zebra mussel control, ostensibly for purposes of minimizing discharge of residual chlorine. Zebra mussel control is absolutely necessary to ensure the integrity of the Burns Harbor water system for safety and process reliability reasons. The rates of hypochlorite addition are already well controlled to ensure effective zebra mussel control, and cannot be minimized to any great extent without jeopardizing the effectiveness of this program. Also, residual chlorine is already monitoring and controlled at Outfalls 001 and 002, so there is no need for a duplicative monitoring program. ArcelorMittal is willing to review secondary containment for hypochlorite storage solution and loading/unloading procedures to assess whether improvement can be made to minimize the potential for unwanted releases; however, Section F serves no useful purpose and should be removed from the permit.

Although ArcelorMittal requests the removal of Section F, if maintained, the following revisions are requested:

1. Paragraph a(3) requires "quarterly monitoring of the influent to the wastewater treatment system". The specific reason that this requirement is in the permit is due to the addition of hypochlorite at the intakes for zebra mussel treatment. Monitoring of the outfalls during treatment is required. Therefore, a requirement to monitor at the wastewater treatment system serves no purpose and should be removed from the NPDES permit.
2. Paragraph a(4) requires an annual status report. Because monitoring data are already submitted as part of the monthly monitoring reports, this reporting requirement is not necessary and should be removed from the NPDES permit.

Response #43: Section I.F of the permit shall be modified to remove the requirement to monitor the influent to the wastewater treatment system and to remove the requirement to submit an annual status report.

Comment #44: Part I, Sections H and I, Storm Water Monitoring and Non-numeric Conditions; Storm Water Pollution Prevention Plan (Pages 32 through 49 of 68)

The Burns Harbor Plant is configured with three outfalls that discharge storm water: Outfalls 001, 002 and 009. Outfall 001 discharges a combination of treated process wastewater from Outfall 011, treated sanitary wastewater from Outfall 031, non-contact

cooling water, storm water from a portion of the site and, on occasion, pumped water from the Burns harbor Lake Michigan water intakes. Outfall 002 discharges primarily non-contact cooling water and storm water from a portion of the site. Outfall 009 discharges only storm water from a limited portion of the site in the vicinity of Outfall 002, and is the only storm water only outfall.

Most, if not all, of the proposed requirements set out in Part I, Section H of the draft NPDES permit regarding storm water monitoring and non-numeric conditions are from EPA's multi-sector general permit (effective May 27, 2009). We understand that IDEM intends that the proposed Section H requirements apply to the entire Burns Harbor Plant, and not just the area drained by Outfall 009. However, in ArcelorMittal's view, the Section H requirements duplicate what is required under Section I. The proposed requirement set out in Section I requires ArcelorMittal to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the entire Burns Harbor Plant in accordance with recent EPA guidance.

To simplify the renewed NPDES permit, we recommend that IDEM replace Section H and I with a modified section I that would contain the following requirements:

1. Development of Storm Water Pollution Prevention Plan

Within 12 months from the effective date of this permit, the permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the permitted facility. The plan shall be based on the EPA Multi-Section General Permit, as water pollution prevention plans (EPA833 B-09 082, February 2009)

This provision would eliminate the need for Section H. The balance of Section I would include what is currently in sub-paragraph d of Section I of the draft permit (General Requirements on Pages 48 and 49). This recommendation would simplify the permit by eliminating approximately 15 or 16 pages of the draft NPDES permit, provide a needed 12-month schedule to implement the proposed requirements of Sections H and I, and ensure a reasonable and effective SWPPP is developed and implemented at Burns Harbor.

To the extent that Section H is maintained, it must include an implementation timeframe of at least 12 months similar to the time frame set forth in Section I of the draft permit. Additionally, there are other problems with how Section H of the draft permit refers to specific areas of the Burns Harbor Plant or references other sections of the draft permit that need to be addressed. For example:

Item 3 of this section Page 32) refers to "BMP requirements for the Coal Processing Area". Outfall 009 does not receive storm water from any coal processing areas, therefore, this statement should be removed from the permit.

Item 5.j of this section authorizes non-storm water discharges "when they occur in accordance with Part I.E.2.c of the permit". However, Part I.E.2.c of the permit deals with the requirement for reporting the final results of a TRE study.

Item 6 requires the submission to IDEM of an annual report reviewing the SWPPP. This is not a typical approach since the plan must be revised and made available for inspection by the agency. The requirement for a separate submission of the results of this annual review should be removed from the permit.

Response #44:

IDEM has developed an approach to address storm water associated with industrial activity that is based upon EPA's current approach. The non-numeric effluent limits were taken from the Multi-Sector storm water language that EPA developed to address storm water discharges. IDEM with EPA's help took the appropriate language from the general permit for the non-numeric permit conditions and significantly revised our storm water pollution prevention plan (SWPPP) language to match the language used in the multi-sector SWPPP to address how the requirements set forth in the non-numeric permit conditions have been met. The SWPPP is not a stand alone document as before but now merely documents what the facility has done to meet the requirements in the non-numeric section of the permit. All control measure, BMPs etc., are in Section I.H of the permit and Section I.I. of the permit provides the basis for ArcelorMittal to document how they meet the requirements in Part I.H. IDEM does agree that both parts I.H and I.I coincide with each other and will take up to twelve (12) months from the effective date of the permit.. Appropriate changes to the permit have been made to reflect this.

Comment #45: Part III, Section A.1 Cooling Water Intake Structures (Pages 56 to 68 of 68)

The draft permit includes proposed requirements to conduct monitoring to ensure that the cooling water intake structures (CWISs) meet the requirements of Section 316(b) of the Clean Water Act. Specifically, there are proposed requirements for a two-year entrainment study (Part III.A.2.a (i), pages 65 and 66) and a two-year impingement study (Part III.A.2.b (i), pages 66 and 67). ArcelorMittal believes that these proposed requirements are more burdensome and costly than necessary to achieve the stated goals. In the fact sheet (Pages 60 to 62), IDEM describes the CWISs and the analysis by which IDEM determined that these structures meet the definition of "best technology available" (BTA).

Significantly, the maximum calculated velocities at the Lake Michigan Pumping Station Nos. 1 and 2 are 0.19 feet per second and 0.28 feet per second, respectively, which are significantly lower than the threshold value of 0.5 feet per second that is believed to impair fish swimming ability. Further, past studies have shown no entrainment or

impingement impacts, and there have been no significant changes to the CWISs or their operation since that time. ArcelorMittal agrees that a monitoring requirement is appropriate in order to confirm that there continues to be no impacts to fish populations. However, we request that the duration of the entrainment and impingement studies be reduced from two years to one year. The one year study will provide the necessary data at a much lower cost.

Response #45: IDEM appreciates your concerns, but the permit will not be modified as requested.

Comment #46: Part III, Section A.5 Fish Return Evaluation (Page 68 of 68)

This section requires the evaluation of fish returns that do not exist at Burns Harbor. Therefore, the section should be removed.

Response #46: IDEM will not remove the requirement to evaluate a fish return from the permit.

Comment #47: Typographical Errors

Page 23, Part I.D.5, First paragraph, last line: "This report **shall** that include detailed information on..."

Page 31, Part I.F.b..1, second line: "modeling the destruction **or** ef removal of the pollutant in the..."

Page 35, Part I.H.5.d.3, third line: "who may cause, detect, or respond to a spill or **leak** lead must be..."

Response #47: The errors noted above will be corrected in the NPDES permit.

Comments received from the Environmental Law and Policy Center are listed below and they will be followed by IDEM's response to each comment:

Comment #48: We object to the issuance of the NPDES as drafted unless serious legal deficiencies described below are addressed in the final permit. We have identified three main concerns with the draft permit:

1. Sanitary wastewater discharges from the Burns harbor WWTP that are not permitted by a Clean Water Act NPDES permit would be illegal discharges subject to immediate enforcement action.
2. A more specific analysis of Best Available Cooling Water Intake Structures should be required in the 316(b) analysis.

3. Monitoring should be required to conduct more robust RPEs for a number of parameters.

The Clean Water Act could not state more clearly that any discharge of pollutants not subject to a Clean Water Act permit is an illegal discharge. 33 U.S.C.1311 (a). Discharges of pollutants that are not covered by an NPDES permit are therefore subject to enforcement actions, including citizen suits under 33 U.S.C 1365.

The fact sheet states that the discharge from the Burns Harbor WWTP is currently covered by Outfall 031 of the administratively extended ArcelorMittal NPDES permit and that it is simultaneously covered by a state "Operational Permit" No. INJ060801. The fact sheet states that only one of these permits is necessary, so it proposes to eliminate all NPDES limits applicable to the Burns Harbor WWTP. Outfall 031 has been treated as an internal outfall in the NPDES permit, which ultimately discharges into Burns Ditch via Outfall 001. However, the pollution discharges from the WWTP have been accounted for nowhere within the NPDES permit, in Outfall 001 or elsewhere. The proposed change from an NPDES permit to a state operating permit alone would leave discharges from the WWTP unregulated by the Clean Water Act NPDES program, and unaccounted for as a waste stream within the ArcelorMittal NPDES permit.

IDEM may be right that only one of the two permits currently applicable to Outfall 031 is strictly necessary, but it chose the wrong permit to remove. A state permit to discharge pollution, even one with identical permit limits and conditions, is not equivalent to a permit issued under a state's delegated Clean Water Act NPDES program authority. (See Or. State Pub. Interest Research Group, Inc v. Pac. Coast Seafoods Co., 361 F. Supp. 2d 1232, 1243 (D. Or. 2005) (Where discharge requirements were not legal equivalent to NPDES permit, discharger is subject to citizen suits to enforce against discharge without a permit). For example, a non-NPDES state Operational Permit does not carry with it the assurance that public participation will be provided as the Clean Water Act requires, 33 USC 1342 (b)(3), that U.S. EPA has the authority to oversee the permit and ensure that all Clean Water Act NPDES requirements have been followed, 33 USC 1342(b) and (c)(3), or that citizens may bring suits if the permit terms are not followed, 33 USC 1365. Even if a state currently has public participation requirements and opportunities to bring suit that are parallel to those provided by the Clean Water Act, if the state were to abolish all of those requirements tomorrow, citizens would have not direct recourse with U.S. EPA to enforce the permit or bring the program back into compliance with the Clean Water Act.

The easiest way to fix the problem with the draft permit would be to leave the current Outfall 031 limits in place in the NPDES permit. Another option would be to issue a new NPDES permit to the Town of Burns Harbor to cover the WWTP discharges. The option of incorporating appropriate effluent limits (including EW. Coli. Limits to protect public

health) into Outfall 001 of the ArcelorMittal NPDES permit is more problematic, since the limits should be applied prior to dilution with the large volume of steel plant effluent that also discharges through Outfall 001. This situation differs from pretreatment, as the effluent is subject to no further treatment prior to discharge to waters of the state. One way or another, the Town's WWTP must be subject to NPDES permit limits when a final NPDES permit is issued to ArcelorMittal.

Response #48: After consulting with U.S. EPA, IDEM has decided to authorize the discharge of the effluent from Operational Permit INJ060801 from Outfalls 011 and 001 by including the authorization to discharge the effluent from the Town of Burns Harbor's WWTP in the opening paragraphs of Part I.A.1 and Part I.A.4 of NPDES permit No. IN0000175. By authorizing the discharge from Operational Permit INJ060801 in the NPDES permit, the discharge from the Town of Burns Harbor's WWTP will be subject to the Clean Water Act through a NPDES permit.

IDEM is considering the modification of Operational Permit No. INJ060801 to replace the limits for fecal coliform with limits for E. Coli.

Comment #49: Section 316(b) of the Clean Water Act requires that facilities that operate cooling water intake structure use the best available technology to minimize adverse environmental impact from those structures, including impingement and entrainment of aquatic life. Because specific requirements have not been adopted for existing steel mills, IDEM is required to make a Best Professional Judgment determination of the Best Technology Available for this facility. Strictly speaking, this permit should contain IDEM's BPJ determination and a compliance schedule for the applicant to implement the BTA.

We are concerned that instead, the draft permit fact sheet—and the section identified as IDEM's BTA determination—discusses only the attributes of the existing intake structures. It is difficult to see how examination of only the existing technology can possibly result in a BPJ determination that the existing technology is the best available. It seems necessary to evaluate other intake structures alternatives in order to have a point of reference as to which technology is indeed the best.

The draft permit proposes to require ArcelorMittal to conduct a two-year study to further characterize the nature and extent of the environmental impacts of the cooling water intake structures in a scientifically valid manner. (Fact sheet page 61) This study should explicitly require the applicant to evaluate the impacts of other cooling water intake structures in order to facilitate IDEM's future determination on which technology is BTA for the Burns Harbor steel plant.

Response #49: IDEM worked very closely with U.S. EPA Region V to make the determination that the Cooling Water Intake Structure (CWIS) for the ArcelorMittal

Burns Harbor is equivalent to BTA. EPA set forth criteria for determining BTA in the regulations for implementing section 316(b) of the Clean Water Act, but those regulations were remanded by the Courts. In the interim, EPA has instructed the state to utilize the criteria in the regulations as guidance for determining if a CWIS meets BTA. That is the criteria with which IDEM evaluated the existing CWIS for ArcelorMittal Burns Harbor and found that the intake velocities at the screen of the pump station were much lower than the recommended 0.5 feet per second rate established by EPA for new CWIS.

EPA is requiring a study to confirm the BTA determination in this NPDES permit and for all of the dischargers that withdraw significant amounts of water from Lake Michigan when their NPDES permit is renewed. The requirement to conduct a CWIS confirmation study does not mean that ArcelorMittal has a CWIS that does not meet the BTA criteria.

Comment #50: In examining the Wasteload Allocation and Reasonable Potential to Exceed WQBELs Analysis, Table 1, Fact Sheet page 64, it appears that a number of the parameters for which RPEs were evaluated were based upon only one sample. Under the "Daily Maximum PEQ" heading, fourteen parameters report the "Number of Daily samples" as 1. In other words, the PEQ for those parameters was calculated based on only one data point. RPEs calculated based on a very small number of data points are subject to higher multiplying factors to account for potential anomalies and errors, but more data points are always a better way of assessing the likelihood that an exceedance of WQBELs will occur. Of the fourteen RPEs based on a single sample, five show monthly average PEQs that approach or equal the PEL for those parameters: Beryllium, Cadmium, Nickel, Phenol and Tetrachloroethylene. We ask that in the final permit additional monitoring is required for these fourteen parameters so that the next round of RPEs can be founded on more reliable data. In the case of phenol, to which the applicant has requested an extended 301(g) variance, we ask that IDEM confirm that the PMELs for phenols will ensure that the effluent will not exceed the WQBELs that would apply to this facility.

Response #50: IDEM agrees that an RPE analysis is more accurate when using multiple data for any pollutant parameter. However, the RPE analysis was conducted in accordance with the procedures contained in 327 IAC 5-2-11.5.

Comments received from Save the Dunes are listed below and they will be followed by IDEM's response to each comment:

Comment #51: Variance: Phenols and Ammonia

The permit includes a 301(g) variance for phenols(4AAP) and ammonia as N thought Outfall 001 into the East Branch of the Little Calumet River. This waterway and its

tributaries downstream to Lake Michigan are designated as Salmonid waters. While the permit acknowledges that the Indiana Department of Natural Resources (DNR) was consulted regarding thermal impacts, it does not state whether DNR was consulted about the proposed variance for phenols and ammonia. We urge IDEM to remove or strengthen this variance due to the sensitive nature of these Salmonid waters.

Response #51: As stated in the Fact Sheet:

"Section 301(g) of the Clean Water Act and 327 IAC 5-3-4(b)(2) allow for a variance from the applicable BAT requirements through the development of proposed modified effluent limitations (PMELs) for the non-conventional pollutants of ammonia, chlorine, color, iron, and total phenols (4AAP) provided that the following conditions are met:

- (1) The proposed modified effluent limitations (PMELs) will meet the categorical BPT effluent limitations (Technology Based Effluent Limits (TBELs)) or applicable Water Quality-Based Effluent Limitations (WQBELs), whichever are more stringent;
- (2) The PMELs will not result in any additional requirements on other point or non-point sources;
- (3) The PMELs will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life and recreational activities; and,
- (4) The PMELs will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

The WQBELs for ammonia based on the current applicable water quality criteria for the protection of Salmonid species are: 1.13 mg/l as the monthly average and 1.7 mg/l as the daily maximum. All of the PMELs are more stringent than the WQBELs for ammonia based on the current applicable water quality criteria. The highest monthly average PMEL is 0.9 mg/l and the highest daily maximum PMEL is 1.27 mg/l.

The report from the IDNR regarding the quality of the Salmonid fish population in the Little Calumet River indicates that they are doing well in the Little Calumet River. There is no information known to IDEM that indicates the Little Calumet River is being

negatively impacted by the levels of ammonia and phenol (4AAP) downstream of Outfall 001.

Comment #51: Limits for Manganese

Manganese is a contaminant of great concern for human health. The draft permit does not include monitoring or limits for manganese; weekly monitoring and limits must be included in the permit to protect receiving waters and residents.

Response #51: The amount of Manganese in the wastewater from Outfall 001, as indicated in the permit application, is 0.05 mg/l. The monthly average PEL is 1.0 mg/l and the daily maximum PEL is 2.0 mg/l. Since the RPE analysis indicates that there is not a reasonable potential to exceed the water quality criteria for Manganese, the NPDES permit does not include monitoring or limits for Manganese at Outfall 001.

Comment #52: Limits for Lead

According to U.S. EPA's Toxic Release Inventory of 2009, 300 pounds of lead compounds were released by AMBH into the Little Calumet River. Lead is known to cause physical and mental development issues in children. In adults, it can result in kidney problems or high blood pressure. The permit should go beyond requiring monitoring and reporting of lead at Outfall 001; it should provide limits for lead there.

Response #52: The WQBELs for Lead are more stringent than the effluent limits based on the federal effluent limitation guidelines for the Iron and Steel Category. The WQBELs for Lead were placed on internal Outfall 011, which is the wastewater containing the treated process wastewater because it was assumed to be the main source of Lead in the wastewater at Outfall 001. However, after further consideration, IDEM has decided to move the WQBEL for lead back to Outfall 001 and remove the limits for lead at Outfall 011 because it is possible for additional sources of lead to be present in the storm water from the AMBH property that would only be detected in the discharge from Outfall 001. Lead will be monitored at Outfall 011.

Comment #53: Limits for Chromium

U.S. EPA's Toxic Release Inventory of 2009 states that ArcelorMittal discharge over 500 pounds of chromium compounds into the Little Calumet River. This month, the Chicago Tribune and other newspapers highlighted the fact that hexavalent chromium is being detected at elevated levels in drinking water supplies throughout the country, including Chicago, yet monitoring of this toxic substance in drinking water is not required at the federal level. Hexavalent chromium has been linked with stomach cancer. While the draft permit has a loading limit for hexavalent chromium at internal Outfall 011, there is no concentration limit. Outfall 011 then discharges through Outfall

001 to the East Branch of the Little Calumet River. We believe it is necessary to set limits for hexavalent chromium at Outfall 0011 where it is released to the waters of the state to protect human health and the environment.

Response #53: Hexavalent Chromium was included in the evaluation of pollutants known or expected to be present in the effluent from Outfall 001 to determine if the level of Hexavalent Chromium in the effluent from Outfall 001 has a reasonable potential to exceed the WQBEL for Hexavalent Chromium. The evaluation used 42 individual sample results for Hexavalent Chromium to establish the Projected Effluent Quality (PEQ). The PEQ is compared to the Projected Effluent Limit to determine if the PEQ exceeds the PEL. In this case the monthly average PEQ = 0.031 mg/l and the monthly average PEL is 0.17 mg/l. Since the PEL is greater than the PEQ, there is not a Reasonable Potential to Exceed (RPE) the water quality based effluent limit and a limit is not required in the permit. The daily maximum PEQ = 0.031 mg/l and the daily maximum PEL is 0.018 mg/l. Since the PEL is greater than the PEQ, there is not a Reasonable Potential to Exceed (RPE) the water quality based effluent limit and a limit is not required in the permit.

Comment #54: Compliance Schedule: Mercury, Copper, Zinc and Silver

Per the draft permit, AM BH cannot be 100% sure they can comply with the limits set for mercury, copper, zinc and silver at Outfall 001 and has requested a period of time to achieve compliance. The draft permit allows AMBH fifty-four months, nearly the entire permit window, to comply. Given the fact that AMBH has had this permit administratively extended for many years, we believe a tighter schedule should be mandated so reduction can occur as quickly as possible. The schedule should outline milestones along the way for pollution prevention that can be attained at specific points.

The schedule also identifies key points at which IDEM and/or EPA must review AMBH's plan. Given the current nature of the administratively extended permit, and the possibility that this extension could occur again in the future, we need this permit to outline clear action to be taken when AMBH, IDEM or EPA fail to comply with schedules to ensure protection in the interim.

Response #54: IDEM does not know if AMBH is 100% sure that they can comply with the final limits for Mercury, Copper, Zinc and Silver, but IDEM is going to make AMBH try to comply with the final limits by including a schedule of compliance in the permit. The permit conditions are enforceable including the schedule of compliance, so it is possible for an enforcement action to be initiated if one of the responsible parties fail to comply with the permit conditions.

The length of time that a permit has been administratively extended has nothing to do with the need for a compliance schedule to achieve compliance with new WQBELs.

Comment #55: Variance: Alternate Thermal Effluent Limitations

The draft permit would allow AMBH to seek a new 316(a) variance for thermal effluent limitations, but allows them to use the old permit's limits until such a time that a new 316(a) variance is approved by US EPA and IDEM, (Page 39 of the Fact Sheet). Save the Dunes respectfully requests a more stringent approach here, including denial of this thermal variance. The Clean Water Act states that in order to issue such a variance AMBH must meet the burden of proof to show that the proposed limitations would be more stringent than necessary to protect fish and wildlife. We believe the law would require more data from IDEM and AMBH to meet this burden of proof prior to issuing the proposed variance. This variance was applied for in 1975 and the maximum temperatures allowed in summer – up to 86 degrees Fahrenheit at Outfall 001 and 90 degrees Fahrenheit at Outfall 002 – are for too high to protect fish and wildlife.

Also, according to the permit, DNR was consulted on the thermal issues and commented that temperature is not impacting fish migration. We would like documentation of the data behind this statement.

Response #55: IDEM and USEPA did approve the renewal of the existing 316(a) variance for alternate thermal effluent limits at Outfall 001 and 002 because AMBH demonstrated that there has been no appreciable harm has occurred over the period of time since the last permit was issued that contains the same alternate thermal effluent limits. IDEM confirmed this by consulting with DNR. IDEM does not know the sources of information that Brian Breidert, Lake Michigan Fisheries Biologist with IDNR, utilized to make his statements about the migration of salmonid species in the Little Calumet River.

The reopening clause specifically allowing AMBH to apply for a new 316(a) variance was included in the permit because AMBH wants to increase their alternate thermal limits at Outfall 001. AMBH has requested that the Summer (July, August and September) effluent temperature limits be increased to 90 °F. This request was denied at this time.

Comment #56: Definitions

Save the Dunes is concerned about subjective, undefined terms used in the permit. In fact, there are discrepancies in the language in the same sections of the AMBH permit and the US Steel Midwest permit that is out for review. On page 55 of AMBH's draft permit, in Part II, section A, Paragraph 16 (New or Increased Discharge of Pollutants), it states that AMBH cannot undertake any deliberate action that would result in degradation of water quality in Lake Michigan. It specifies the need to notify IDEM's commissioner if there is increased loading of a bioaccumulative chemical of concern (BCC), above normal variability, attributable to a deliberate action.

At the public hearings, Save the Dunes and others requested definitions of these terms, which are not defined in the Indiana Administrative Code. In comparing this AMBH language with the USS Midwest permit, the latter permit does not use the words deliberate action or above normal variability. Clearly, IDEM is using more stringent definitions for the USS Midwest permit and looser definitions in the AMBH permit. This is legally ambiguous and we urge IDEM to use the same language in the AMBH permit as is used in the USS Midwest permit.

Response #56:

The rule upon which the permit language is based (327 IAC 5-2-11.7(a)(3)(A) and (B)) reads as follows:

(3) "For all dischargers directly into an OSRW, the commissioner shall establish the following conditions in the permit applicable to the regulated facility:

(A) The permit shall prohibit the regulated facility from undertaking any deliberate action that would result in a degradation of water quality of the OSRW, unless the action complies with applicable provisions of this section.

(B) Whether or not the permit contains a limitation for a BCC, the permit shall require monitoring for any BCC known or believed to be present in the permitted discharge, from any point or nonpoint source over which the permittee has control. If there is an increase in the loading of a BCC above normal variability, attributable to a deliberate action, the permit shall require the discharger to notify the commissioner of the increase. If the increased discharge of the BCC does not qualify under at least one (1) of the exceptions under subsection (b) or (c) and is attributable to a deliberate action by the permittee, the commissioner shall require elimination of the increase."

Part II.A.16 of the permit consolidates the rule requirements into the following language: "This permit prohibits the permittee from undertaking any deliberate action that would result in degradation of the water quality in Lake Michigan. The permittee shall notify the Commissioner if there is any increase in the loading of a bioaccumulative chemical of concern (BCC), above normal variability, attributable to a deliberate action unless the increased discharge of the BCC qualifies under one of the exceptions under 327 IAC 5-2-11.7(b) or (c)."

IDEM does not have a non-rule policy that spells out the meaning of the rule, however, IDEM will provide the following insight into the interpretation of the rule in question:

A deliberate action is an action that is taken on purpose. A deliberate action is an action that is completed with the full knowledge of the permittee responsible for the discharge.

The term "above normal variability" is defined in 327 IAC 5-2-11.3(b)(1)(C) which states:

"Notwithstanding clauses (A) and (B), the following do not constitute a significant lowering of water quality:

(i) Changes in loadings of any substance within the existing capacity and processes, and that are covered by the existing applicable permit. These changes include, but are not limited to, the following:

(AA) Normal operational variability, including, but not limited to, intermittent increased discharges due to wet-weather conditions."

All wastewater treatment plants have operational variability which produces variability in their effluent quality. The normal operational variability is acceptable as long as the effluent remains within the effluent limits in the NPDES permit.

So as long as the effluent variability is only due to normal operational variability and not due to an action taken by the permittee that is outside of the existing capacity and processes and that is not covered by the existing applicable permit, then the effluent variability that is within the permit effluent limitations is acceptable and in compliance with the permit.

Comment #57: Flow Measuring Device

The draft permit states that a flow measuring device for the discharge from the water cannon should be installed no later than one year after the permit is issued. This device is very simple technology to install and should be installed within one month of permit issuance.

Response #57: The permit is being modified to allow ArcelorMittal to estimate the flow from the water cannon until they have a flow measuring device installed.

Comment #58: Storm Water

We urge IDEM to go beyond the non-numeric standards for storm water by including specific measurable requirements in the permit. General terms like "minimize", "to the extent achievable", etc. are vague and more clear definitions and targets are desired. The Stormwater Pollution Prevention Plan does not specify the amount by which pollutants should be reduced-it simply states that reductions should occur. We need numeric targets here.

Also, no timeframe is specified for AMBH to develop a narrative description of existing and planned management practices to improve water quality and stormwater runoff. This permit has been extended for many years and AMBH has long been aware of the need for such a narrative. We request that the permit language be strengthened to

specify this be completed within six months of permit issuance. Save the Dunes is particularly concerned about this issue given AMBH's history of ignoring best management practices by stockpiling wastes outdoors without proper attention to stormwater issues and water quality impacts.

Response #58: The storm water pollution prevention plan (SWPPP) requirements in the ArcelorMittal Burns Harbor NPDES permit are consistent with the SWPPP requirements in the other recently proposed and issued NPDES permits for the steel mills in North Western Indiana. The permit conditions are based on EPA's multi-sector general permit for storm water associated with industrial activity. So the permit conditions are the accepted approach to managing storm water at an industrial facility.

Comment #59: Best Practicable Technology

We are concerned that ArcelorMittal Burns Harbor continues to meet only Best Practicable Technology (BPT) standards rather than Best Available Technology standards. My understanding is that this is due to legal issues such as EPA's failure to eliminate the central wastewater treatment facility exclusion (despite intent to eliminate it) and prior owner Bethlehem Steel's submission of paperwork to maintain its eligibility for exclusion. It is feasible to use Best Available Technology (BAT) levels in Northwest Indiana, and we believe federal law requires it through Public Law 89-298 of the 89th Congress, S. 2300, October 27, 1965, Title III, Section 301. Best Practicable Technology standards of the Clean Water Act became effective in July of 1977. We must progress beyond that outdated time to available standards today in 2010. ArcelorMittal's corporate leaders take pride in their environmental perspectives; we ask them to bring these cleaner technologies here.

Response #59: The NPDES permit does contain effluent limits at Outfall 011 that are based on BAT except for the pollutants that have a 301(g) variance: Ammonia and Phenol.

Comment #60: Anti-degradation

IDEM used a non-rule policy document for its anti-degradation analysis. This policy has been heavily criticized by the Alliance for the Great Lakes, Save the Dunes, and others. We need IDEM to adopt final anti-degradation rules for use in such analyses rather than continually relying on non-rule policies. This approach does not protect human health or the environment. Should these rules be implemented after this permit is issued, we request a reopener clause be included. This clause would allow the permit to be revised to comply with new anti-degradation rules.

In addition, by law, increased loading at the facility requires an anti-degradation demonstration in the interim. Since there are four new wastewater loadings in this draft

permit, we believe such a demonstration is required. (The four new loadings include discharge from AMBH Deerfield Landfill, discharge from the water cannon, the unknown portion of all the water treatment chemicals, and the addition of stormwater and other waters to Outfall 001 discharge).

Response #60: The NPDES permit does not include an authorization to discharge any wastewater from the proposed Deerfield Landfill. The discharge from the water cannon, consisting of water from Lake Michigan, was authorized in 1989. Water treatment additives have been in use at the AMBH facility from its inception. IDEM has a process to approve water treatment additives such that they cannot be present in amounts that are chronically or acutely toxic to aquatic life. IDEM cannot stop the weather from making it rain and producing storm water associated with industrial activity. The rain is not a deliberate action taken by the permittee. There has not been any new or increased permit limits in this NPDES permit and there has not been any new or increased discharges permitted by this NPDES permit, therefore, this permit does not authorize any action that results in degradation of the receiving waters.

Comment #61: Stockpiles/Proper Disposal

The draft permit identifies in Part II (Standard Conditions for NPDES Permits, B. Management Requirements, Section 4 – Removed Substances) that AMBH must dispose of solids, sludge, filter backwash, or other pollutants removed from or resulting from or resulting from treatment or control of wastewaters *"in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal"*. These same provisions (in italics) were included in AMBH's 1988 NPDES Permit. However, AMBH has engaged in open dumping/stockpiling of such materials without regard to these provisions in the past and continues to do so through this day. We therefore request that IDEM increase enforcement of these activities and compliance with these important provisions that are set up to protect human health and the environment.

The permit language states that sludge generated by the Secondary Wastewater Treatment Plant will be disposed of on-site at AMBH's proposed landfill. Save the Dunes has administratively appealed this permit, which we acknowledge could delay landfill construction. That issue aside, we understand that the landfill construction will take two years. We request information about how will this material be managed in the interim.

Response #61: The NPDES permit does not directly regulate the disposal of solid waste materials. IDEM's Office of Land Quality is responsible for the proper disposal of solid waste materials and they have decided to require AMBH to construct a landfill.

The NPDES permit will be modified as necessary to reflect any changes in the discharge of wastewater resulting from the future disposal of the regulated solid waste materials after receiving an application to modify the permit.

Comment #62: Enforcement Schedule

We request a written explanation of the frequency with which federal and state inspections of this facility have occurred in the past and will occur in the future. Save the Dunes is concerned that the general public is likely not aware that for the most part, companies are trusted with monitoring themselves. Knowing these schedules will provide comfort that the company's protocols are adequate and that they are addressing violations appropriately. With extensive occurrences of non-compliance with the Clean Water Act, and the fact that hundreds of millions of gallons of wastewater are discharged by the company every day into a salmonid receiving stream, the Little Calumet River, and lake Michigan, enforcement must be strengthened.

Response #62: NPDES permits do not and will not include any schedule for conducting inspections of the permitted facilities. For information about the inspection schedules of IDEM OWQ, please contact the Inspection Section in the Data Compliance Branch at 317/234-2579.

Comment #63: Water Treatment Additives

Per the draft permit, water treatment additives may be used during the permit period at the plant provided they are reported to regulatory agencies. Save the Dunes wants assurance that these additives have been screened to determine the fate, amounts, toxicity, persistence and bio-accumulative characteristics of these substances in order to protect our aquatic resources.

Response #63: The worksheet for obtaining approval to use a water treatment additive is found at <http://www.in.gov/idem/files/appadd.pdf> . IDEM uses that information in the water treatment additive approval form to determine if the water treatment additive is approvable as follows:

All dischargers are required to disclose information on the water treatment additives in use or proposed for use in accordance with 327 IAC 5-2-9. Dischargers must demonstrate that such additives will not be harmful to aquatic life. During the preparation of the NPDES permit or modification, this information may be used to establish permit limitations which comply with all Indiana Water Quality Standards. Additionally, if a permittee changes water treatment additives during the term of their NPDES permit, the following information must be submitted to the Industrial NPDES Permits Section.

The information required by this form must be submitted for each additive in use or proposed for use. Some of this information may come from the Material Safety Data Sheet (MSDS) for the additive and should be included with this application. It should also be noted that bio-monitoring of the effluent for the affected outfall(s) may be required. Please provide the following information for each additive.

Discharges are required to disclose information on the water treatment additives in use and to demonstrate that such additives will not be harmful to human health or aquatic life. The following calculations are to be performed on any chemical treatment products ultimately discharged to Water of the State. This worksheet must be completed separately for each chemical treatment product in use. This worksheet is to be returned with all appropriate data entered into the designated areas with calculations performed as indicated.

What is the Average Daily Discharge (A.D.D.) volume of the final discharge point to the receiving water body?

A.D.D. = _____ (in M.G.D.)

Please calculate the In-stream Water Waste Concentration (IWC in percent) of this discharge using the data entered above.

IWC = $\frac{\text{A.D.D.} \times 100}{(1/2 \times Q_{7,10})(0.646) + \text{A.D.D.} (\text{MGD}) + ()}$ = _____ %

(1/2 X Q7,10)(0.646) + (A.D.D) (MGD) + ()

This value (IWC) represents the waste concentration to the receiving water during low flow conditions.

II. What is the name of the whole product chemical treatment proposed for use in the discharge identified in Part I?

Circle one: * New Chemical Treatment* Replaced Chemical Treatment

Use: Cooling _____ Boiler _____ Water/Waste _____

Please list the ingredients and percent composition as shown on the MSDS:

_____	_____ %
_____	_____ %
_____	_____ %

Name any ingredient that may be present and may cause toxicity at the proposed Outfall:

Chemical Name

if known discharge concentration of the ingredient _____ mg/l

What feed or dosage rate (D.R.) is used in this application? The units must be converted to maximum grams of whole product used in a 24hr period.

D.R.= _____ grams/24hr period

Please note, fluid ounces (a volume) must be converted to grams (a mass). The formula for this conversion is:

Grams of product = fluid oz. of product x 1 gal. water x 8.34 lbs. x specific gravity of product x 453.59 g.

Estimate total volume of the water handling system between entry of the product and NPDES discharge point:

Volume = _____ million gallons

Total System Volume _____ million gallons Average Cycle per Blowdown _____

Retention time (lagoons, holding ponds, internal Outfall, internal ditch) hrs

What is the pH of the handling system prior to product addition? In unknown, enter N/A. _____

Outfall Application:

Dosage Rate _____ mg/l Blowdown Rate (BD) MGD

Provide additional information which reduces the final concentration of the product at the permitted Outfall:

Internal system demand _____, Volatization _____, Chemical Reaction _____

What is the decay rate (D.K.) of the product? If unknown, assume no decay (D.K.=0) and proceed to asterisk (*). The degradation must be stated at pH level within 1/2 pH standard unit within handling system. Enter the half life (Half Life is the time required for

the initial product to degrade to half of its original concentration). **Please provide copies of the sources of this data.**

H.L. = _____ Days

The decay rate is equal to 1 X 0.69 = _____ = Decay Rate (D.K.)

Calculate degradation factor (D.F.). This is the first order loss coefficient.

*D.F. = A.D.D. + (D.K.) = _____ (MGD) + () = _____ (Volume)

Calculate Steady State Discharge Concentration:

Discharge Conc. = _____ (D.R.) = _____ () = _____ mg/l

(D.F.)(Volume)(3785) () () (3785)

If different than Steady State Discharge then, Calculate (provide bases for calculation on a separate sheet)

and Show Final Product Concentration:

Product Concentration at the Outfall _____ mg/l

Calculate concentration of product during low flow conditions.

(Receiving Water Concentration)

(Discharge Conc.) x (IWC%) = () x () = _____ mg/l (Receiving Water Concentration)

III. Indiana Water Quality Standards Requirements

List all LC50 data for the whole product (see 327 IAC 2-1.5-12). Indiana Water Quality Standards require acute toxicity data for at least one of the following three genera in the family Daphnidae: Ceriodaphnia sp., Daphnia sp., or Simocephalus sp. If available, also list other organisms listed. Examples have been provided below.

Organism	Test Duration (HOURS)	LC50(mg/l)
<u>Daphnidae</u>	<u>48 hrs</u>	_____
<u>Rainbow Trout</u>	<u>96 hrs</u>	_____
<u>Bluegill or Channel Catfish</u>	<u>96 hrs</u>	_____

<u>Phylum Chordata (Fish or Amphibian) (i)</u>	<u>96 hrs</u>	
<u>Benthic Crustacean (ii)</u>	<u>48 to 96 hrs</u>	
<u>Insect (iii)</u>	<u>48 hrs</u>	
<u>Rotifer, Annelida, Mollusca (iv)</u>	<u>48 to 96 hrs</u>	
<u>Other (v)</u>	<u>48 to 96 hrs</u>	

Examples:

(i) Phylum Chordata	Lungfish, frog, salamander, toad, etc.	
(ii) Benthic crustacean	Vargula hilgendorffii	Sea Firefly
	Cymodoce coronata	Marine Pill Bug
	Caprella californica	Skeleton shrimp, crayfish
		Crawdad
(iii) Insect	Order ephemeroptera	mayfly,
	odonoata	dragonfly, damselfly,
	plecoptera	stonefly,
	trichoptera	caddisfly,
	diptera	mosquito, midge
(iv)	Rotifera	No examples
	Annelida	Segmented Worms and Leeches
	Mollusca	Snails, Slugs, and Bivalves

(v) Other is specified in 327 IAC 2-1.5-11 (d)(2)(A) as "a family in any order of insect or any phylum not already represented."

Choose the lowest LC50 listed above:

A. Enter the LC₅₀: _____ mg/liter

B. Enter the Chronic Value:

mg/liter

For Comparison of Water Quality Criteria with Discharge Concentration of Water Treatment Additive:

Determination of Secondary Acute Value (SAV):

1. ALL FACILITIES

If all eight (8) minimum data requirements for calculating an FAV using Tier I (see 327 IAC 2-1.5-11(d)(2)(A)) are not met, a secondary acute value (SAV) shall be calculated using the lowest LC₅₀ value available for at least one of the following: Ceriodaphnia sp., Daphnia sp., or Simocephalus sp. The lowest LC₅₀ is divided by an adjustment factor, which corresponds to the number of satisfied data requirements listed in 327 IAC 2-1.5-11(d)(2)(A).

SAV = Lowest LC₅₀ Listed Above = _____ mg/liter

Adjustment Factor

Number of Minimum Data Adjustment Factor

Requirements Satisfied

1	21.9
2	13.0
3	8.0
4	7.0
5	6.1
6	5.2
7	4.3

** To meet Indiana Water quality standards at the Point of discharge, 327 IAC 2-1.5-12, the Steady State Discharge Concentration or the Final Product Concentration of the proposed chemical treatment additive shall not exceed the calculated SAV.

Determination of Secondary Chronic Value (SCV):

2. FACILITIES WHICH HAVE A DILUTION FLOW OF LESS THAN 400:1 (Q_{7.10}/Q_e)

If the chronic value is not available then,

Secondary Chronic Value (SCV)= SAV = _____ mg/liter

**** To meet Indiana Water Quality Standards 327 IAC 2-1.5-12, the Receiving Water Concentration (calculated in Part II) shall not exceed the calculated SCV.**

3. Choose the appropriate Water Quality Criterion and the Water Treatment Additive Concentration from calculations immediately above and place in this blank:

a. Apply Acute Criterion for all Dischargers

From Part II enter the concentration of the product at the Outfall:

Discharge Concentration= _____ mg/liter

SAV(Secondary Acute Value)= _____ mg/liter

b. Apply Chronic Criterion for Dilution Flow <400:1

From Part II enter the receiving water concentration:

Receiving Water Concentration= _____ mg/liter

SCV(Secondary Chronic Value)= _____ mg/liter

IV. Analysis.

If the Discharge Concentration (part II) is greater than the SAV(Secondary Acute Value), then this chemical treatment additive is unacceptable for use.

If the Receiving Water Concentration (part II) is greater than the calculated Secondary Chronic Value (SCV), then this chemical treatment additive is unacceptable for use.

3. Additional product characteristics information such as biodegradation data, partition coefficients, octanol water partition coefficients, and/or other information available to ensure that the concentration of the product does not produce acute or chronic effects on aquatic organisms may be submitted separately.

V. In addition, list measures in place to ensure that excessive levels of water treatment chemicals are not used and subsequently discharged through Outfalls:

This information will be reviewed by IDEM to determine if all of the information necessary to properly characterize the water treatment additive and its potential toxicity. If the initial information is not sufficient to allow for this characterization, additional information will be requested.

Proprietary information regarding the chemical composition of any water treatment additive will be kept confidential in accordance with the terms of 327 IAC 12.1. Claims of confidentiality must be made at the time of submittal; the information must be properly marked, segregated and secured at the time of submittal; and the person or company requesting confidentiality must provide justification as to why the information meets the criteria for it to be maintained as a trade secret, privileged information or confidential in accordance with 327 IAC 12.1

This application should include the following and must be signed by a person in responsible charge to be valid. This signature attests to the following:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(Printed Name)

(Title)

(Signature)

(Date Signed (mm/dd/yyyy))

Comment #64: Slag Processing

The slag processing system at the plant, while managed by a contracting firm on site, is integral to the iron and Steel Making production process at the facility. As such, by law it should be included and addressed in this permit.

Response #64: The NPDES permit application does not include a point source discharge of pollutants to the waters of the state from the slag processing system at AMBH. Therefore, the NPDES permit does not include any requirements specific to the slag processing system at AMBH.

Comment #65: Sampling Locations

We would like to see diagrams indicating where water samples will be taken for the facility to ensure no benefit of dilution or other factors is skewing the data.

Response #65: The fact sheet contains maps showing the location of the water sampling sites as follows: Outfall Nos. 001, 002, 003, 009 and 011 are on Page 5 of the Fact Sheet, Outfall Nos. 002 and 009 are on Page 6 of the Fact Sheet, and Outfall Nos. 001 and 011 are on Page 7 of the Fact Sheet. The wastewater flow diagram on Page 12 of the fact Sheet also indicates the monitoring locations.

Comment #66: Fecal Coliform Bacteria

The draft permit eliminates the requirement for monitoring Fecal Coliform Bacteria, which was monitored under the administratively extended permit. *Escherichia coli* (*E. Coli*) can cause severe health issues for humans. The Little Calumet River does not meet Indiana's state water quality standards for *E. Coli*. As a result, portions of the river are on the Little Calumet River, Lake Michigan, and residents.

Response #66: The only known source of fecal coliform and *E. Coli*. Bacteria in the effluent from Outfall 001 is the sewage treatment plant owned by the Town of Burns Harbor which discharges treated and disinfected sanitary wastewater into the Secondary Wastewater Treatment Plant owned by AMBH that discharges through Outfall 011 to Outfall 001. The quality of the effluent from the Town of Burns Harbor's sanitary wastewater treatment plant is regulated by Operational Permit No. INJ060801 issued by IDEM. The Town of Burns Harbor's sanitary WWTP has been in compliance with the disinfection requirements of Operational Permit No. INJ060801. Therefore, since the effluent from the Town of Burns Harbor's sanitary wastewater treatment plant have been in compliance with the disinfection requirements of Operational Permit No. INJ060801 and the discharge from the Town of Burns Harbor's sanitary wastewater treatment plant receives additional treatment in the SWTP owned by AMBH and then it

is further diluted by the non-contact cooling water that is mixed with the effluent from Outfall 011 of the AMBH NPDES permit, IDEM is certain that the amount of fecal coliform or E.Coli. bacteria present in the discharge from Outfall No. 001, attributable to the discharge from Operational Permit No. INJ060801, meets all applicable water quality standards for the protection of human health.

IDEM is considering the modification of Operational Permit No. INJ060801 to replace the limits for fecal coliform with limits for E. Coli.

Comment #67: Dioxins

We see that dioxins and furans are not covered in this permit. Please explain.

Response #67: Dioxin was not detected in amounts that pose a reasonable potential to exceed the WQBELs for dioxin. The permit does include a new internal outfall which contains effluent limits for 2,3,7,8- tetrachlorodibenzofuran.

Comment #68: Whole Effluent Toxicity

We ask that the Whole Effluent Toxicity measurement, a critical measure of acute and chronic toxicity, not be taken just for the first three months of the permit and then every three months thereafter for the life of the permit – we ask for the initial frequency to continue through the permit period.

Response #68: IDEM believes that the monitoring frequency and permit requirements for Whole Effluent Toxicity are adequate to ensure that the discharge is not toxic to aquatic life and if the discharge is found to be toxic to aquatic life, the permit requires AMBH to conduct a Toxicity Reduction Evaluation to identify and eliminate the source of the aquatic toxicity.

Comment #69: Intake Structures

We are concerned about the intake structures and impact on fish. The assessment appears to assume that Lake Michigan water levels will remain the same, yet levels would likely impact impingement and entrainment of fish. We would like to see an assessment of potential issues that could arise if lake levels become lower. We would also like to see the data behind the intake analysis. Should negative impacts be noted during the two-year study, we request that corrective action be taken.

Response #69: The Cooling Water Intake Structure (CWIS) of the AMBH facility meets the criteria set by EPA for determining if a CWIS is equivalent to the Best Technology Available (BTA). The study of the CWIS required by the NPDES permit is to confirm that the CWIS does meet the BTA criteria established by EPA. IDEM has no information that suggests the water level of Lake Michigan is going to be lowered to the

point that the water intake structure that is 40 feet below the surface will be negatively impacted during the foreseeable future.

Comments received from Charlotte J. Read are listed below and they will be followed by IDEM's response to each comment:

Comment #70: Pollutants from this facility that discharge into the Little Calumet and then to Lake Michigan and the discharges that go directly into Lake Michigan will generally travel in a westerly direction toward the Ogden Dunes water intake of the Indiana-America Water Company. This should have been noted in the Fact Sheet for this facility as well in the Fact Sheet for US Steel's Midwest Steel Plant. Their discharges from Portage Burns Waterway also enter Lake Michigan and generally flow westerly toward the above-mentioned Indiana-American water intake. Hexavalent chrome is or may be present in discharges from both facilities. This should be of special interest to those who rely on drinking water from Lake Michigan because hexavalent chrome is showing up in some city drinking water supplies [www.chicagotribune.com/health/ct-met-chromium-durbin-kirk20101220.0.5906406.story].

Response # 70: IDEM did develop water quality models of the discharges from ArcelorMittal Burns Harbor and U.S. Steel Midwest at the same time to ensure that the discharge from the AMBH facility will not result in a violation of Indiana Water Quality Standards downstream of the discharge from the AMBH facility including all public water supply inlets in Lake Michigan. ArcelorMittal Burns Harbor sends the wastewater containing Hexavalent Chromium off site for disposal.

Comment # 71: ARBH has long struggled with thermal problems at its outfall 001 which discharges into the Little Calumet River. In 1988 when a proposal to create a fish-way for Salmonids to spare them an overheated trip up the Little Calumet River, leaving the Little Calumet in that location exclusively for heated and polluted wastewater, Save the Dunes and the National Park Service persuaded the agency to ditch the ditch. Shortly thereafter, the water cannon concept was developed and continues to this day. In my opinion, it is time for the agency and the facility to agree to protect the Little Calumet River by dealing with thermal problems long before the heat gets to the river. No more variances for heat! The demonstration for granting a variance is very similar to the requirements for an anti-degradation demonstration. It does not appear from the Fact Sheet that the facility has had to make a demonstration recently for a variance for heat or for the other pollutants still being proposed to be included in the draft permit at elevated amounts. The data used to grant or extend the temperature variance are generally twenty or more years old. Fish studies alone cannot verify "no appreciable harm" has been done. What about micro-invertebrate studies and clams and mollusks [which once were plentiful in the East Arm of the Little Cal]. If

these have not been done, or have been done decades ago, and then compared with current data. I suspect the showing of "no appreciable harm" will not be made.

Variance language used in the Fact sheet stresses that even under a variance; Indiana water quality standards are being met. Since to my knowledge, Indiana Water Quality standards have not been subject to revision and public review in a long time. The clean Water Act says they should be revised every three years. IDEM should at least develop a water quality standard for phenols.

Response # 71: IDEM evaluated the record for instances of harm being done to the aquatic life in the Little Calumet River, the harbor inlet containing Outfall 002 and the Burns Waterway. IDEM found no evidence of any harm occurring to aquatic life that is attributable to the thermal component of the discharge of wastewater from AMBH. An alternate thermal limit (316a variance) may be continued for an existing discharger in accordance with 327 IAC 5-7-4(c) as follows:

(c)(1) Existing dischargers may base their demonstration upon the absence of prior appreciable harm in lieu of predictive studies. Any such demonstrations shall show:

(A) that no appreciable harm has resulted from the thermal component of the discharge (taking into account the interaction of such thermal component with other pollutants, such as oxygen-demanding pollutants and toxic pollutants, and the additive effect of other thermal sources) to a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge has been made. AMBH made a demonstration that no appreciable harm has resulted from the thermal component of their discharge and therefore, IDEM decided to renew the alternate thermal effluent limits for outfall Nos. 001 and 002

Comment # 72: The operation permit for the wastewater treatment plant owned by the town of Burns Harbor but operated by AMBH used to have its own discharge point 031 and a separate NPDES permit. That outfall is proposed to be eliminated in this permit. The municipal plant currently uses fecal coliform instead of e-coli, a carryover when it was owned and operated exclusively for use of the steel mill. For example, there is no limit for either fecal coliform or e-coli at outfall 011 or outfall 001. Does the plant still treat sanitary waste from the mill itself?

Who will be responsible for certifying or reporting that this change has been? In addition to the town residential users, are there restrictions on types of discharges that the town collection infrastructure can accept and send to this treatment plant. For instance there is a very large truck stop with numerous gasoline and diesel fuel tanks, a large grocery-type building that contains restaurants, etc, and a large truck washing facility. There is another, smaller gas station several trucking companies, and an Amrox facility that recycles pickle liquor; I think the latter is in the town. Does town storm water

also enter this town-owned facility, does 011 or 001 reflect accurately what is in this discharge?

Response # 72: The sanitary wastewater treatment plant owned by the Town of Burns Harbor treats the sanitary wastewater from the AMBH facility and the Town of Burns Harbor. The Operational Permit for the Town of Burns Harbor (INJ060801) was recently renewed and it does contain effluent limits for fecal coliform instead of E. Coli. IDEM believes that having the Burns Harbor sanitary WWTP meet the bacteria standards at a point prior to entering the secondary wastewater treatment plant that discharges through Outfall 011 and then through Outfall 001 will ensure that the WQBELs for bacteria are achieved at Outfall 001. The treated wastewater from the Town of Burns Harbor's sanitary WWTP averages 1.05 MGD and it is diluted with process wastewater and non-contact cooling water which averages 108.0 MGD from Outfall 001. Therefore, the discharge from the Town of Burns Harbor's sanitary wastewater treatment plant receives approximately 100 to 1 dilution by the time it is discharged from Outfall 001.

IDEM is considering the modification of Operational Permit No. INJ060801 to replace the limits for fecal coliform with limits for E. Coli.

Comment # 73: I support continuous temperature monitoring and installing a flow meter at the water cannon, until such time as the facility and the agency get serious about dealing with the temperature issue at 001. Is there any evidence that the infusion of Lake Michigan water is providing effective in protecting the Little Calumet River? Where exactly does it enter the wastewater stream?

Response # 73: Temperature is monitored on a continuous basis at Outfall 001. The flow from the water cannon will be estimated in the interim period prior to AMBH installing a flow meter on the water cannon. The water cannon has proven effective in reducing the temperature of the effluent from Outfall 001. The water cannon is located near the secondary wastewater treatment plant (SWTP) owned by AMBH and it discharges into the cooling water canal that flows by the SWTP owned by AMBH.

Comment # 74: What type of treatment do the two "polishing lagoons" provide? When were the current lagoons installed? How often are the aerators operated in the lagoons and do they tend to stir up the sediment creating a cloudy discharge into Shadyside Ditch? Are they effective in reducing the wastewater temperature?

Response #74: The polishing lagoons provide flocculation/coagulation and clarification of the wastewater from the SWTP. The polishing lagoons were installed when the AMBH facility was originally built. The typical operating period of the aerators in the polishing lagoons is not known by the IDEM OWQ Permits Branch and it is not relevant to the establishment of appropriate NPDES permit conditions. The aerators should be

responsible for a percentage of the reduction of the temperature of the discharge from Outfall 011.

Comments received from the U.S Dept of the Interior under the authority of the National Park Service are listed below and they will be followed by IDEM's response to each comment:

Comment #75: The National Environmental Policy Act (NEPA) requires that secondary and cumulative impacts be assessed when they are reasonably foreseeable. It is unrealistic for IDEM to issue, simultaneously, two major NPDES permits, U.S. Steel (IN0000337) and ArcelorMittal (IN0000175), both of which discharge to the same waterway in very close proximity and not expect cumulative impacts. Failure by IDEM to holistically consider these potential effects is a disservice to the public and threatens the cultural, historical and ecological resources of the national lakeshore.

Response # 75: The US Steel Midwest facility and the ArcelorMittal Burns Harbor facility have been in operation and discharging wastewater in accordance with their individual NPDES permits for several decades. The cumulative impacts from these two dischargers have been occurring during the period of time that both of these facilities have been discharging which began decades ago. The fact that the NPDES permits for these facilities are being renewed at the same time does not have any impact on the cumulative impact of these discharges. IDEM did develop water quality models of both these discharges at the same time to ensure that the discharge from the AMBH facility will not result in a violation of Indiana Water Quality Standards at the point where the US Steel Midwest facility discharges into the Burns Waterway downstream of the discharge from the AMBH facility.

Comment # 76: Burns Waterway, the conveyance these facilities discharge into, is heavily contaminated by both current and relic uses including the continual input of municipal wastewater. We understand that ArcelorMittal no longer discharges onsite sanitary water, but this should not preclude the discussion of potential additive effects of wastewater impacts in conjunction with thermal effluent. Potential effects of thermal effluent should address lethal, sub-lethal, avoidance, and attractive nuisance effects on all aspects of the aquatic resources.

Both the United States Geological Survey and the NPS have measured and identified a sustained bacteriological problem in the waterway and its corresponding effects on the recreational use of the adjacent NPS owned property, Portage Lakefront and Riverwalk. While ArcelorMittal no longer directly contributes to bacteriological contamination through its discharge, it does contribute synergistically to the systemic problem and an evaluation of these effects should be addressed.

The interlinking of these two permits does not appear to be completely lost by IDEM as both draft permits were placed on public comment simultaneously, even going to the extent of initially scheduling a single public hearing to accommodate both permits. It is unfortunate that IDEM only acknowledges the similarity and proximity of the two permits by expediting the permitting process and not by assessing cumulative and or synergistic impact.

Response #76: ArcelorMittal Burns Harbor is not a major contributor of treated sanitary wastewater to the Little Calumet River. IDEM did develop water quality models of the discharges from ArcelorMittal Burns Harbor and U.S. Steel Midwest at the same time to ensure that the discharge from the AMBH facility will not result in a violation of Indiana Water Quality Standards at the point where the US Steel Midwest facility discharges into the Burns Waterway downstream of the discharge from the AMBH facility.

However, IDEM is considering the modification of Operational Permit No. INJ060801 to replace the limits for fecal coliform with limits for E. Coli.

Comment #77: Impingement / Entrainment 316(b)

The current permit language delegates the responsibility of providing solutions for impingement and entrainment to the permittee and supplies little to no actual guidance. The language is so vaguely written as to allow almost any action to be acceptable. We urge IDEM and EPA to definitively address this ongoing problem and develop specific requirements to minimize the loss of millions of larval and adult fish annually.

Response #77: The Cooling Water Intake Structure (CWIS) of the AMBH facility meets the criteria set by EPA for determining if a CWIS is equivalent to the Best Technology Available (BTA). The study of the CWIS required by the NPDES permit is to confirm that the CWIS does meet the BTA criteria established by EPA.

Comments received from Mr. James E. Bartos are listed below and they will be followed by IDEM's response to each comment:

Comment #78: I feel that this permit review and approval process should not have been delayed since August 1993. Please monitor more closely ArcelorMittal's wastewater discharges in Lake Michigan. How about insisting that they change their steel making steps to the direct iron method that is used in other countries with less pollution? I have lived near the lake for over 40 yrs. And I care about it. In addition, I worked at US Steel and LTV Steel when I was younger and I do not want to see the current companies go out of business. Just please be quicker with checking on their wastewater. Finally, I would have attended the meeting on December 9, 2010, but there was a death in my immediate family.

Response #78: Even though the permit renewal has taken much longer than anyone desired, the AMBH facility has been under a NPDES permit for the entire period that they have been discharging and the renewed permit is very similar to the one that is being replaced. So, the wastewater from the AMBH facility has been regulated, monitored and inspected since the NPDES permit was last issued in 1988.

Comments received from Mr. Lyman C. Welch and Ms. Elizabeth A. Teague of the Alliance for the Great Lakes are listed below and they will be followed by IDEM's response to each comment:

Comment #79: Through the enclosed comments, the Alliance for the Great Lakes urges the Indiana Department of Environmental Management to strengthen the proposed discharge permit for ArcelorMittal's plant by including:

The Alliance urges IDEM to modify the draft permit to include the following:

- More stringent limits and additional monitoring for Fecal Coliform Bacteria, Phenols, Ammonia, Manganese, Lead, Chromium, Mercury, Copper, Zinc, Silver and thermal to protect Lake Michigan's value for drinking water, recreation and fish and other aquatic species;
- A stronger and clearer prohibition on new or increased discharges to ensure adequate protections are in place to prevent degradation of water quality, and
- More specific storm water requirements to minimize pollution caused by runoff

Response #79: The NPDES permit contains effluent limitations based on federal effluent limitation guidelines and Indiana Water Quality Standards. The selection of pollutants that are monitored and limited in the NPDES permit based on Indiana Water Quality Standards were selected in accordance with 327 IAC 5-2-11.5 Determination of reasonable potential to exceed water quality standards. The preliminary effluent limits used in the evaluation of the pollutants reasonable potential to exceed water quality standards are based on the most stringent applicable water quality standard which includes standards for the protection of human health from the ingestion of water from the receiving waterbody.

The NPDES permit contains the antidegradation language from the rule found at 327 IAC 5-2-11.7(a)(3) regarding future new or increased discharges.

The Storm Water Pollution Prevention Plan requirements were taken from the U.S. EPA multi-sector general permit for storm water associated with industrial activity. The multi-sector permit contains storm water management requirements tailored to a steel mill which were included in the NPDES permit for ArcelorMittal Burns Harbor.

Comment #80: Fecal Coliform Bacteria

The administratively extended NPDES permit for ArcelorMittal includes internal Outfall 31, which discharges sanitary wastewater. The draft permit no longer includes internal Outfall 31. The Fact Sheet prepared by IDEM explains that this change is due to the fact that in 2005, the Town of Burns Harbor purchased the sanitary wastewater facility from ArcelorMittal. The sanitary wastewater from the Town of Burns Harbor was then connected into the facility. The facility continues to be operated by ArcelorMittal, but is now owned by the Town of Burns Harbor. IDEM further explains that the discharge from internal Outfall 31 is now covered by Operational Permit No. INJ060801 and therefore does not need to be covered by the NPDES permit. The discharge from internal Outfall 31 becomes a part of the discharge of Outfall 001, which empties into the Little Calumet River.

One of the parameters currently covered under internal Outfall 31 in the administratively extended permit is Fecal Coliform Bacteria. A review of Operational Permit INJ060801 reveals that the permit contains limits on Fecal Coliform Bacteria discharge from internal Outfall 31. While the discharge of fecal coliform bacteria is limited under the operational permit, it is not limited or monitored under the draft NPDES permit at Outfall 001. *Escherichia coli* (*E.coli*) is a subgroup of the Fecal Coliform Bacteria. *E. coli* can cause severe illness, including severe diarrhea and abdominal cramps. Kidney failure is a possible side effect, especially in children under 5 years old and the elderly.¹

The Little Calumet River does not meet Indiana's state water quality standards for *E. coli* bacteria. As a result, portions of the Little Calumet River have been placed on Indiana's Section 303(d) list of impaired waters. Thus, a Total Maximum Daily Load (TMDL) has been established for *E. Coli* for the Little Calumet River.² By excluding monitoring or limits for Fecal Coliform Bacteria, the NPDES permit is not only incomplete, it fails to contain, at a minimum, monitoring of Fecal Coliform Bacteria and of *E. coli* bacteria to fully ensure protection of the Little Calumet River, Lake Michigan and the health of the surrounding population.

Response #80: A TMDL for *E. coli* for East Branch Little Calumet River (including Assessment Unit INC0164_T1086) and Portage-Burns Waterway (Assessment Unit INC0164_T1108) was approved by U.S. EPA January 28, 2005 and is part of the Little Calumet/Burns Ditch TMDL. The current ArcelorMittal Burns Harbor permit includes the discharge of sanitary wastewater from internal Outfall 031. The TMDL notes that the sanitary WWTP was sold to the Town of Burns Harbor and that the Town has an operational permit for the WWTP. The TMDL notes that IDEM will apply *E. coli* limits in the operational permit. The TMDL requires load reductions for *E. coli* from nonpoint sources, but not from point source discharges. A TMDL for *E. coli* for the Lake Michigan shoreline (including Assessment Unit INC0181G_G1093) was approved by

U.S. EPA September 1, 2004 and is part of the Lake Michigan TMDL. This TMDL does not place limits for *E. coli* on any of the ArcelorMittal Burns Harbor outfalls to Lake Michigan.

IDEM is considering the modification of Operational Permit No. INJ060801 to replace the limits for fecal coliform with limits for *E. Coli*.

Comment #81: 301(g) Variance for Phenols (4AAP) and Ammonia as N

The draft permit, like the administratively extended permit, contains a 301(g) variance for Phenols (4AAP) and Ammonia as N. Phenols and Ammonia are discharged from ArcelorMittal through Outfall 001 into the Little Calumet River. The East Branch of the Little Calumet River and its tributaries downstream to Lake Michigan via Burns Ditch are designated as salmonid waters.³ Salmonid waters must be capable of supporting a salmonid fishery⁴

In the Fact Sheet for the draft permit for ArcelorMittal, IDEM covers the 301(g) variance for Phenols (4AAP) and Ammonia as N.⁵ However, the explanation does not include any indication that IDEM consulted with the Indiana Department of Natural Resources (IDNR) specifically in regards to the effect that the 301(g) variance for Phenols (4AAP) and Ammonia as N would have on salmonid waters. In this case, the 301(g) variance in the draft permit for Phenols (4AAP) and Ammonia as N should be more stringent to take into account the fact that the discharge goes into salmonid waters.

Response #81: The following description of the receiving waters, taken from the waste load allocation used to develop the water quality based effluent limits, recognizes the Salmonid uses of the receiving waters:

"The East Branch of the Little Calumet River is designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The East Branch of the Little Calumet River and its tributaries downstream to Lake Michigan via Burns Ditch (Portage-Burns Waterway) are designated in 327 IAC 2-1.5-5(a)(3)(B) as Salmonid waters and shall be capable of supporting a Salmonid fishery. Therefore, the East Branch of the Little Calumet River and Portage-Burns Waterway are designated as Salmonid waters. The East Branch of the Little Calumet River enters the Indiana Dunes National Lakeshore at S.R. 20 (upstream of Outfall 001) and leaves the Indiana Dunes National Lakeshore about 0.5 miles upstream of its confluence with Portage-Burns Waterway (about 1.0 miles downstream of Outfall 001). All waters incorporated in the Indiana Dunes National Lakeshore are designated in 327 IAC 2-1.5-19(b)(3) as an outstanding state resource water (OSRW). Discharges to OSRWs are subject to the antidegradation implementation procedure for OSRWs in 327 IAC 5-2-11.7.

The Indiana portion of the open waters of Lake Michigan is designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The Indiana portion of the open waters of Lake Michigan is designated in 327 IAC 2-1.5-5(a)(3)(G) as a Salmonid water and shall be capable of supporting a Salmonid fishery. Public water system intakes are located in the Indiana portion of the open waters of Lake Michigan so it is designated in 327 IAC 2-1.5-5(a)(4) as a public water supply. Industrial water supply intakes are located in the Indiana portion of the open waters of Lake Michigan so it is designated in 327 IAC 2-1.5-5(a)(5) as an industrial water supply. The Indiana portion of the open waters of Lake Michigan is designated in 327 IAC 2-1.5-19(b)(2) as an outstanding state resource water (OSRW). As noted above, discharges to OSRWs are subject to the antidegradation implementation procedure for OSRWs in 327 IAC 5-2-11.7."

All of the 301(g) variance based effluent limitations for ammonia as N are more stringent than the applicable Water Quality Based Effluent Limits that are protective of Salmonid species.

Comment #82: Manganese

According to the preliminary dataset of the Toxic Release Inventory for 2009, 9700 pounds of manganese were released into the Burns Waterway and the Little Calumet River by ArcelorMittal.⁶ While manganese is an element that is essential to humans, too high of a concentration can be toxic, potentially causing hallucinations, forgetfulness, nerve damage and other severe health effects such as impotence.⁷

The draft permit currently does not contain any monitoring or limits for manganese. Weekly monitoring and limits for manganese must be included in the permit to fully protect the receiving waters and the surrounding population.

Response #82: Manganese was included in the evaluation of many pollutant parameters to determine if they are present in the effluent in amounts that have a reasonable potential to exceed the applicable water quality based effluent limitations. The preliminary effluent limits for Manganese are 1.0 mg/l as the monthly average and 2.0 mg/l as the daily maximum. The projected effluent quality for manganese is 0.31 mg/l. Since there is not a reasonable potential to exceed the WQBELs for Manganese, the NPDES permit does not contain any limits for manganese.

Comment #83: Lead

The Toxic Release Inventory for 2009 also indicates that 300 pounds of lead compounds were released by ArcelorMittal into the Little Calumet River.⁸ Lead in drinking water can cause delays in development (both physical and mental) in children and can cause kidney problems or high blood pressure in adults.⁹ the draft permit

contains monitoring and reporting requirements for lead at Outfall 001.¹⁰ However, due to the volume of lead being discharged by ArcelorMittal, the draft permit should contain limits for lead at Outfall 001.

Additionally, in Table 001-1 of the Permit lead has a reference to a note [7].¹¹ Note [7] references the fifty-four month (54) schedule of compliance for copper, silver, zinc and mercury. A review of the schedule of compliance reveals no mention of lead.¹² Therefore, note [7] appears to have been erroneously added to the line for lead and should be removed.

Response #83: The WQBELs for Lead are being moved back to Outfall 001. Lead will be monitored at Outfall 011. (See Response # 52) There is not a schedule of compliance for lead and the typographical error will be corrected.

Comment #84: Chromium

According to the Toxic Release Inventory for 2009, ArcelorMittal discharges 500 pounds of chromium compounds per year into the Little Calumet River.¹³ "[T]here is a clear risk of stomach cancer from drinking water contaminated with hexavalent chromium."¹⁴ However, a review of the draft permit for ArcelorMittal reveals that at Internal Outfall 011 there is a loading limit for hexavalent chromium, but not concentration limit.¹⁵ The discharge from Internal Outfall 011 becomes a part of the discharge from Outfall 001, which discharges into the East Branch of the Little Calumet River, and yet there are no limits or reporting requirements for hexavalent chromium at Outfall 001. Limits for hexavalent chromium must be included in the permit to address this dangerous compound.

Response #84: The source of the Hexavalent Chromium has been eliminated from the discharge because AMBH sends the Hex. Chromium rinse water off-site for disposal.

Comment #85: Schedule of Compliance for Mercury, Copper, Zinc and Silver

The draft permit for ArcelorMittal contains a fifty-four month schedule of compliance for Outfall 001 for Mercury, Copper, Zinc and Silver. The compliance schedule should be aggressively reduced to be as short as possible to reach necessary reductions sooner. Reporting requirements are included throughout the term of the compliance schedule.¹⁶ In addition to the reporting requirements, the compliance schedule should also contain interim benchmarks for the level of pollution prevention that should be attained at particular points within the schedule.

Response #85: IDEM has worked closely with the U.S. EPA on the content of the schedule of compliance. The schedule has been modified to make the compliance

process more implementable, but the period of time allowed to achieve compliance has not been changed.

Comment #86: Time Period to install Flow Measuring Device

The draft permit requires ArcelorMittal to "install a flow measuring device for the discharge from the water cannon used to further cool the effluent from outfall 001 to meet the temperature limits found in Table 001-4...as soon as possible but no later than one year after the effective date of this permit."¹⁷

The time period for ArcelorMittal to install a flow measuring device on the water cannon should be shorter, a period of six months would be more than sufficient to complete installation.

Response #86: The water cannon is typically not used until the summer months. The permit has been modified to allow AMBH to estimate the flow from the water cannon until the flow measuring device is installed. IDEM is confident that AMBH will have a flow meter installed on the water cannon before it is used in the summer of 2011.

Comment #87: 316(a) Variance for Alternate Thermal Effluent Limitations

Finally, the draft permit continues a 316(a) variance for alternate thermal effluent limitations. The variance would allow discharges of up to 86 degrees at Outfall 001 and up to 90 degrees at Outfall 002 during the summer. This variance was first applied for in 1975 and has continually been renewed.

The Clean Water Act requires that in order for a 316(a) variance to be issued, ArcelorMittal must meet the burden of proof to show that the proposed effluent limitations for the thermal component of the discharge (what would be in place without the variance) would require effluent limitations more stringent than what is necessary to assure the protection of fish and wildlife populations.¹⁸ The Fact Sheet for the permit does not give any indication that ArcelorMittal has met this burden of proof. Therefore, the requirements for the issuance of a 316(a) variance have not been met and a variance should not issue.

The Alliance urges IDEM to gather more comprehensive data from ArcelorMittal on why a variance is required in order to more carefully scrutinize whether variances such as the 316(a) should be continued, rather than simply providing an automatic renewal of a variance first applied for in 1975.

Response #87: It is IDEM's position that AMBH did demonstrate that their discharge has not resulted in any appreciable harm to the aquatic life in the East Branch of the Little Calumet River or in the harbor canal where Outfall 002 is located. (See Response # 55)

Comment #88: Stronger and Clearer Prohibition on New or Increased Discharges is Warranted.

On page 55 of the draft permit in Part II, Section A, Paragraph 16, which covers New or increased Discharge of Pollutants, the permit states “[t]his permit prohibits the permittee from undertaking any deliberate action that would result in degradation of the water quality in Lake Michigan. The permittee shall notify the Commissioner if there is any increase in the loading of a bio-accumulative chemical of concern (BCC), above normal variability, attributable to a deliberate action...” (emphasis added). However, the permit does not contain a definition for either “deliberate action” or for “above normal variability.” In addition, these phrases, as used in a NPDES permit, are not defined within the Indiana Administrative Code.

The need for definitions for these terms is emphasized when the above language is compared with the same section in the draft permit currently out for review for U.S. Steel. On page 56 of the U.S. steel draft permit in Part II, Section A, Paragraph 16, which covers New or Increased Discharge of Pollutants, the permit states “[t]his permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bio-accumulative chemical of concern (BCC) or a new or increased permit limit for a pollutant parameter that is not a BCC...” U.S. Steel is prohibited from taking any action, not solely deliberate actions and “above normal variability” is not used at all.

To ensure full protection of Lake Michigan and ensure clarity and consistency, we urge IDEM to use the same language in this permit as was used for the U.S. Steel permit. Alternatively, in order for ArcelorMittal and the public to have a clear understanding of what actions are prohibited, IDEM must provide definitions for “deliberate action” and “above normal variability” and as explanation for why this section contains different requirements than the same section in the U.S. Steel permit.

Response #88: The rule upon which the permit language is based (327 IAC 5-2-11.7(a)(3)(A) and (B) reads as follows:

(3) “For all dischargers directly into an OSRW, the commissioner shall establish the following conditions in the permit applicable to the regulated facility:

(A) The permit shall prohibit the regulated facility from undertaking any deliberate action that would result in a degradation of water quality of the OSRW, unless the action complies with applicable provisions of this section.

(B) Whether or not the permit contains a limitation for a BCC, the permit shall require monitoring for any BCC known or believed to be present in the permitted discharge, from any point or nonpoint source over which the permittee has control. If there is an

increase in the loading of a BCC above normal variability, attributable to a deliberate action, the permit shall require the discharger to notify the commissioner of the increase. If the increased discharge of the BCC does not qualify under at least one (1) of the exceptions under subsection (b) or (c) and is attributable to a deliberate action by the permittee, the commissioner shall require elimination of the increase."

Part II.A.16 of the permit consolidates the rule requirements into the following language: "This permit prohibits the permittee from undertaking any deliberate action that would result in degradation of the water quality in Lake Michigan. The permittee shall notify the Commissioner if there is any increase in the loading of a bioaccumulative chemical of concern (BCC), above normal variability, attributable to a deliberate action unless the increased discharge of the BCC qualifies under one of the exceptions under 327 IAC 5-2-11.7(b) or (c)."

IDEM does not have a non-rule policy that spells out the meaning of the rule, however, IDEM will provide the following insight into the interpretation of the rule in question:

A deliberate action is an action that is taken on purpose. A deliberate action is an action that is completed with the full knowledge of the permittee responsible for the discharge.

The term "above normal variability" is defined in 327 IAC 5-2-11.3(b)(1)(C) which states:

"Notwithstanding clauses (A) and (B), the following do not constitute a significant lowering of water quality:

(i) Changes in loadings of any substance within the existing capacity and processes, and that are covered by the existing applicable permit. These changes include, but are not limited to, the following:

(AA) Normal operational variability, including, but not limited to, intermittent increased discharges due to wet-weather conditions."

All wastewater treatment plants have operational variability which produces variability in their effluent quality. The normal operational variability is acceptable as long as the effluent remains within the effluent limits in the NPDES permit.

So as long as the effluent variability is only due to normal operational variability and not due to an action taken by the permittee that is outside of the existing capacity and processes and that is not covered by the existing applicable permit, then the effluent variability that is within the permit effluent limitations is acceptable and in compliance with the permit.

Comment #89: Measurable Requirements for Storm Water Are Warranted

Finally, although the Alliance applauds the addition of non-numeric standards for storm water to the draft permit, both the Storm Water Monitoring and Storm Water Pollution Prevention Plan (SWPPP) sections of the permit should contain more specific measurable requirements.

On page 32, Part 1, Section H, paragraph 1 of the draft permit, ArcelorMittal is required to "conduct storm water monitoring for the storm water discharge point identified as Outfall 009 on a 4x yearly Basis." Paragraph 2 then provides a definition of the term "minimize" as used in the remainder of the section: "reduce and/or eliminate to the extent achievable..." the remainder for the section requires that ArcelorMittal minimize pollutants contained with storm water discharged at Outfall 009. However, without containing specific, measurable requirements, ArcelorMittal does not have any hard targets to meet.

In addition, the Storm Water Pollution Prevention Plan also does not specify by how much pollutants are to be reduced, only that reductions are to occur. Without such numerical requirements, a reduction of one percent might be argued to meet the SWPPP section's current requirements.

Plus, on page 47, Part 1, Section 1, paragraph 5 of the draft permit, ArcelorMittal is required to include in the SWPPP "a narrative description of existing and planned management practices and measures to improve the quality of storm water run-off entering a water of the state." However, the draft permit does not set forth a timeframe for instituting any planned management practices described in the SWPPP. Under the current language, ArcelorMittal would arguably be in compliance simply by describing the planned management practices, with no requirement for when they must actually be implemented. The SWPPP should contain a timeframe, including periodic status reports, for the implementation of management practices.

Response #89: There is very little data available for storm water at this time. The goal is to use the quarterly data as the benchmark to drive the concentrations downward. If we don't see a significant reduction or if IDEM believes that a numeric target is necessary, IDEM will modify the permit to include it.

Oral comments provided by Ms. Nicole Kamins, Executive Director of Save the Dunes at the Public Hearing on December 9, 2010 are listed below and they will be followed by IDEM's response to each comment:

Comment # 90: Save the Dunes has long been known in this region as a key champion in protecting water quality and habitats and other important aspects of quality of life.

ArcelorMittal discharges into Lake Michigan, the East Branch of the Little Calumet River, and Burns Harbor. The Great Lakes are one of the most precious fresh water systems in the world and it is ours. It belongs to the people of the Midwest. We're very lucky to have Lake Michigan here. And the East Branch of the Little Calumet River is also very special, designated as an outstanding state resource water of great pride to the State of Indiana. In essence I want to just kind of point out that with these permits we kind of have to ask ourselves, "How clean is clean enough?" I just feel that we can do better than what is shown in these permits and that we owe it to ourselves and future generations to ask that these processes become cleaner over time.

Technologies exist in other parts of the world that are cleaner, some of them being led by ArcelorMittal doing great things elsewhere. They should be brought here, these technologies, regardless of the cost to the company, which I understand in some cases could be very significant. I just think that we deserve the cleaner processes right here in Northwest Indiana.

These permits have been administratively extended for many years. Frankly we're a little bit sad that there are not stronger provisions in them to reduce discharges and eliminate variances. After all, the Clean Water Act and the NPDES program were to eliminate discharges by 1985. I'm just saddened that we're 25 years down the road and still at this point where we're not reducing the variances and reducing the discharges but keeping them the same in the new permits.

And, of course, there's all kinds of technical aspects to these; and I admit I may not understand fully; and I look forward to working with IDEM to answer our questions and clarify our thoughts over time.

So, in reality, and given the legal framework here, what can we ask for? Well, I can tell you we'll have a much more thorough and robust comment section, but just to give you an idea of some of the things we're thinking about, we're looking for diagrams indicating where samples will be taken for monitoring at the facility. We know that there's dilution and other things happening. We just want to get a better understanding of where those samples will be taken to make sure that the data is robust.

IDEM talked to DNR about the impact on fish, but we're hoping they can also chat with them, and we pointed this out at our meeting, about the phenols and the ammonia variance that's requested and how that might impact those critters.

The sludges generated by the Secondary Wastewater Treatment Plant will be disposed of onsite at their proposed landfill. And despite the fact that Save the Dunes is currently in an appeal of that landfill permit for different reasons right now, my understanding is that the landfill would take a couple of years. And we're quite interested in what would

happen with that material in the interim before the landfill would be constructed to ensure that that's not running off into our waterways.

I'm hoping to get better information about how often inspections will occur at the federal and at the state level. I think a lot of people in the general public, including myself a while back, didn't know that, for the most part, the companies regulate themselves and look for concerns over time. And I think that that would just give some reassurance to the public and to us knowing what is the anticipated schedule for the future in watching out for the actions of the facilities and knowing that they're following everything to the "T".

We noted that there have been violations in the past for this facility that were noted in the permit; and we'd urge IDEM and EPA to be swift and strict in their enforcement in the future, since this is such a quality-of-life issue for all of us here.

The TBEL, the technology based effluent limits, in this case, and I may be misunderstanding this. I hope you guys can clarify it for me when you respond to our comments. But we have the technology based effluent limits in this case for the iron and steel manufacturing point source category. These effluent guidelines use production rates to calculate allowable pollutant loadings. ArcelorMittal submitted a four-year period of data to EPA to evaluate these loadings. And because they have a central wastewater treatment facility at ArcelorMittal, they qualified to have alternative effluent limitations.

EPA tried in 2000 to eliminate this exclusion but it remains here because -- there's various reasons. As a result, they are using what's called "best practical technology" here, when in reality it is feasible for them to achieve best available technology. And it's really a series of legal issues that result in that not being the case here.

So, again, there are technologies elsewhere in the world that could help fix some of these things, but that the regulatory law isn't in place right now to force them to do that at this time. I know that ArcelorMittal takes great pride and has great environmental projects; and I'm just urging them to bring some of those technologies right here to Northwest Indiana.

We're very concerned about the intake structures and their impacts on the fish. And one of our major comments here is there is a few things that they are allowed -- they're going to be allowed in the permit to study over time, and intake impacts are one of those things. And we just feel that some of these periods for review or figuring out how to get into compliance for mercury and other things are just too long. In some cases they give them almost to the end of the permit period of five years to come into compliance; and we certainly hope you'll entertain shortening those time frames if possible. And I know Bruno and others at IDEM have committed to kind of give us a better explanation of why

it's just so technologically hard to get some of these things under control. And I'm sure there are good reasons for them, and I'd like to hear what they are.

Response #90: Save the Dunes submitted written comments to IDEM regarding the NPDES permit for AMBH. The written comments contain specific questions that are answered by IDEM above in Comments 51 through 69.

Oral comments provided by Ms. Liz Teague, Policy Associate for the Alliance for the Great Lakes at the Public Hearing on December 9, 2010 are listed below and they will be followed by IDEM's response to each comment:

Comment # 91: The Alliance appreciates the Indiana Department of Environmental Management's willingness to meet with us and other groups to answer questions and to provide additional information during the public comment period. The Alliance is also pleased that the draft permit contains more stringent requirements than the current permit; however, there are still some additional areas in which the permit could be made even stronger to protect the Great Lakes.

The Alliance urges IDEM to modify the draft permit to include the following: More stringent limits and additional monitoring for fecal coliform bacteria, phenols, ammonia, manganese, mercury, copper, zinc, silver, and thermal to protect the integrity of the drinking water supply for millions of people; A stronger and clearer prohibition on new or increased discharges to ensure adequate protections are in place to prevent degradation of water quality; and more specific requirements relating to storm water to minimize the impediment to water quality caused by storm water runoff; to stand on the objectives that I just mentioned, more stringent limits and additional monitoring to the permit to include monitoring for fecal coliform bacteria at Outfall 001 to ensure that all pollutants potentially in the discharge, which includes sanitary wastewater from Outfall 031, are covered by the permit.

In addition, the 301(g) variance in the draft permit for phenols and ammonia should be more stringent, taking into account the fact the discharge goes directly into salmonid waters.

Response # 91: The Alliance for the Great lakes submitted written comments to IDEM regarding the NPDES permit for AMBH. The written comments contain specific questions that are answered by IDEM above in Comments 79 through 89.

Oral comments provided by Mr. Patrick Gorman for the Indiana Steel Environmental Group at the Public Hearing on December 9, 2010 are listed below and they will be followed by IDEM's response to each comment:

Comment # 92: The Indiana Steel Environmental Group urges the EPA to support the process of states issuing timely NPDES permits that are protective of both human health and the environment under the Clean Water Act with limits that are developed and supported by sound science. These permits, properly issued and protective of human health and environment are in everyone's best interest.

Response # 92: IDEM appreciates the support and hopes to live up to your expectations.

Oral comments provided by Mr. Larry Davis at the Public Hearing on December 9, 2010 are listed below and they will be followed by IDEM's response to each comment:

Comment # 93: The AMBH wastewater treatment plant is not capable of adequately treating toxic pollutants known to be present in the discharge. The treatment system was constructed in the 1960s prior to the Clean Water Act. So the answer is to renew the variances in the permit? Shouldn't the purpose of any variance be to provide time to allow for an affective effort to clean up the water pollution? According to 40 CFR 132, appendix F, procedure 2C, the permittee shall demonstrate that the variance requested also complies with antidegradation procedures. There is supposed to be characterization of any increased risk to human health or the environment associated with granting the variance.

The fact sheet states that since there will not be any action taken by AMBH that results in increased loadings or increased permit limits that antidegradation demonstration is not required. However, there are at least two new sources of loading from AMBH: The discharge from the Deerfield Landfill and from the water cannon. It should not take longer than one day to install a flow meter on the water cannon. Other impact should be taken in account such as the increased withdraw of water from Lake Michigan for the water cannon and the increased fish mortality that will result from the water withdraw.

The "Secondary Wastewater Treatment Plant", as defined by AMBH is not a secondary wastewater treatment plant as classified in 327 IAC 5-22-5. How many years does it take to realize that a primary and chemical treatment plant built in the 1960s cannot meet today's water quality standards for the Little Calumet River and Lake Michigan? This plant is not capable of treating organic wastes known to be present in sinter plant wastewater. ArcelorMittal has eight plants in Brazil, Spain and South Africa that are operating with zero effluent, zero discharge. That just goes to show you that you can do if you really want to. Why don't we see the same level of commitment from ArcelorMittal right here on the shores of Lake Michigan? Why doesn't IDEM require the same level of commitment from AMBH?

In the facilities description section of the fact sheet, section 2.1, it states that by-product coke plant wastewaters are not discharged to surface waters. In fact, waste ammonia liquor, produced from quenching coke oven gas can contaminate non-contact cooling water when spiral coolers fail and leak. This has been implicated in fish kills at Outfall 002 in the past.

Wastewater from the slag processing operation, by a contractor, is being discharged to Lake Michigan via underground conduits and ditches. All of the storm water runoff at the AMBH facility is currently uncontrolled and flows to whatever down gradient plat is available which ultimately enters Lake Michigan via ground water or surface water.

Outfall 009 should have numeric limits considering the close proximity of the waste piles from the steel making process. The storm water pollution prevention plan must address all toxic pollutants known or believed to be present at the AMBH facility. The following parameters should be continuously monitored as part of the permit conditions: pH, temperature, specific conductance, dissolved oxygen, total suspended solids, dissolved solids, Chemical oxygen demand, suspended or emulsified oil, cadmium, lead, manganese, dioxin and iron.

I disagree with the fact sheet statement that AMBH does not intentionally introduce mercury, copper, silver or zinc into the steel making process.

Response # 93: Mr. Larry Davis submitted written comments to IDEM regarding the NPDES permit for AMBH. The written comments contain specific questions that are answered by IDEM above in Comments 1 through 33.

Oral comments provided by Ms. Kay Nelson, Director of Environmental Affairs, for the Northwest Indiana Forum at the Public Hearing on December 9, 2010 are listed below and they will be followed by IDEM's response to each comment:

Comment # 94: The Northwest Indiana Forum supports the issuance of quality environmental permits such as the proposed NPDES permit for AMBH.

Response # 94: Thank you for your support.